GV-200B

SERVICE MANUAL

AEP Model
French Model

VIDEO
WALKMAN

SPECIFICATIONS

System

Video recording system	Rotary two-head helical scanning FM system
Audio recording system	Rotary head, FM system
Video signal	CCIR system B, G, H and I, PAL colour CCIR system L, SECAM (transferred to PAL colour)
Usable cassettes	8 mm video format cassettes
Tape speed	SP: approx. 2.0051 cm/sec. LP: approx. 1.0058 cm/sec.
Recording time	SP mode: 1.5 hours LP mode: 3 hours (with Sony P5-90 cassette)
Playback time	SP mode: 1.5 hours LP mode: 3 hours (with Sony P5-90 cassette)
Fast forward/rewinding time	Approx. 7 minutes (with Sony P5-90 cassette)

LCD section

Picture	4 inches measured diagonally 8.2 × 6.2 cm (3 1/4 × 2 1/2 inches)
On-screen display	TN LCD/TFT active matrix method Total picture-element number: 112,086 (479 × 234)

Tuner section

Channel coverage	B/G, I VHF: E2 – E12 channels UHF: 21 – 69 channels Cable TV channels: S01 – S20 L VHF: 5 – 10 channels UHF: 21 – 69 channels Cable TV channels: B – Q
Aerial input	75-ohm minijack for VHF/UHF

Inputs/outputs

VIDEO/AUDIO IN/OUT	Selectable automatically according to the operation
Video input	Phono jack, 1 Vp-p, 75 ohms, unbalanced, sync negative
Video output	Phono jack, 1 Vp-p, 75 ohms, unbalanced, sync negative
Audio input	Phono jack, – 7.5 dBs (0 dBs = 0.775 Vrms), input impedance more than 47 kilohms
Audio output	Phono jack, – 7.5 dBs (330 mV) at load impedance 47 kilohms, output impedance less than 10 kilohms
Speakers	16 ohms, 150 mW
Earphones	Minijack, 8 ohms × 2
CONTROL S	Minijack
Camera input	12-pin

Timer section

Clock	Crystal lock
Time indication	24-hour cycle
Timer setting	Only for recording, 1 event/24 hours

General

Power requirements	Battery mounting surface input: 6.0 V (battery pack) 6.5 V (DC pack DCP-77)
Power consumption	6.9 W (for continuous playback)
Operating temperature	0°C to 40°C (32°F to 104°F)
Storage temperature	– 20°C to 60°C (– 4°F to 140°F)
Dimensions	129 × 71 × 226 mm (w/h/d) (5 1/8 x 2 7/8 x 9 inches)
Weight	Approx. 1.1 kg (2 lb 7 oz) not incl. battery pack
Accessories supplied	Earphone (1) Connecting cord (1) Carrying case (1) Battery pack NP-66H (1) AC power adaptor AC-V30 (1) Lithium battery (1)

AC-V30

Power consumption	20 W
Power requirements	100 – 240 V AC, 50/60 Hz
Output voltage	DC OUT: 7.5 V, 1.6 A in operating mode
Battery charge terminal:	10 V, 1.3 A in charge mode
Operating temperature	0 C° to 40°C (32°F to 104°F)
Storage temperature	– 20°C to 60°C (– 4°F to 140°F)
Dimensions	Approx. 67 × 39 × 138 mm (w/h/d) (2 3/4 × 1 3/8 × 5 1/2 inches) including projecting parts and controls
Weight	Approx. 310 g (11 oz)

Design and specifications are subject to change without notice.

Note
This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

— continued on next page —

For MECHANICAL ADJUSTMENT, refer to the "8mm Video MECHANICAL ADJUSTMENT MANUAL III (U MECHANISM)" (9-972-732-11)

MICROFILM

8 VIDEO TV RECORDER

SONY®

LIST OF RECOMMENDED ACCESSORIES

	Model name	Page
Battery pack	NP-77H, NP-77, NP-55	12
AC power adaptor/Battery charger	AC-V55, BC-55	12
Car battery charger	DC-V30	11
DC pack	DCP-77	17
Colour video camera	CCD-G100STE, CCD-G100E, CCD-G1E	47, 48
Pan tilter	HVR-200	51
Connecting cord	VMC-910MS/920MS (1m/2m) VMC-710EM/720EM (1m/2m)	52, 56
Cleaning cassette	V8-25CLH	62
RFU adaptor kit	RFU-89EKA	55

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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SECTION 1
GENERAL

This section is extracted from instruction manual.

Features

The "Video Walkman" GV-200B is an 8mm video recorder with a LCD (Liquid Crystal Display). Its compact and lightweight design allows you to watch TV programmes and video tapes anywhere and anytime you like.

With this video TV recorder, you can:
— view the playback picture of 8 mm video tapes.
— view TV programmes.
— record TV programmes.

In addition, by connecting it to a video camera (not supplied), you can record pictures with the camera, and play back the recorded pictures on it immediately.

Other features

— Programmes based on PAL and SECAM colour systems receivable
— CRYSTAL-CLEAR still/slow/picture search on LCD
— Timer-activated recording
— SLEEP timer for turning off the unit automatically

This unit uses 8 mm video format cassettes. It records in the SP mode (approximately 2.0051 cm/second) and the LP mode (approximately 1.0058 cm/second) and can play back in the SP mode and LP mode. The quality of the playback picture in the LP mode, however, will not be as good as that in the SP mode.

Television programmes, films, video tapes and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws.

PCM recording/playback is not possible with this unit. The PCM sound recorded with another recorder cannot be played back with this unit.

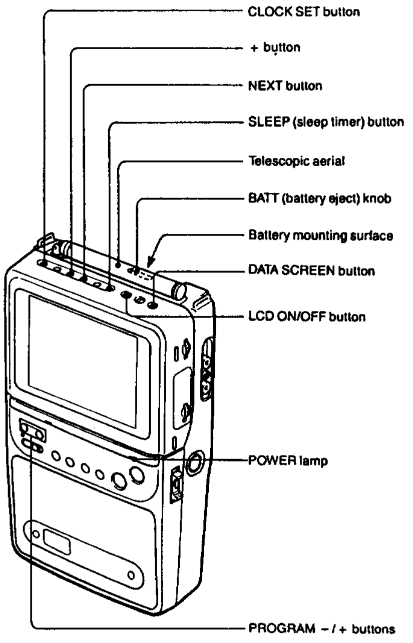
For using this unit abroad, see page 64.

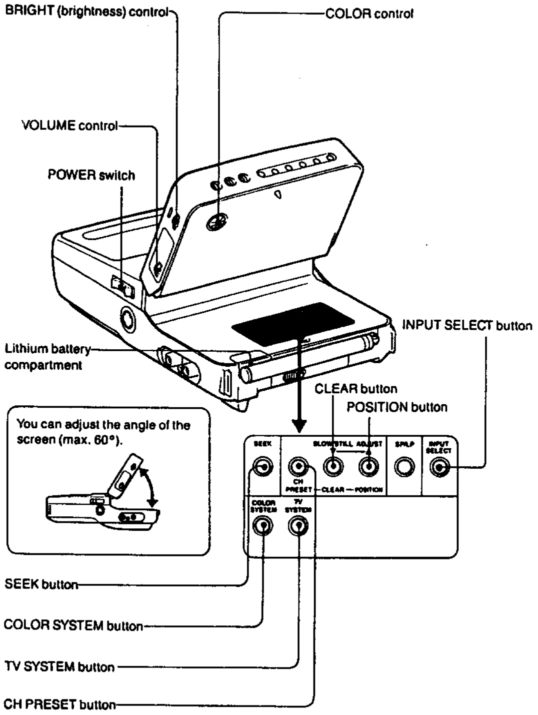
On colour System

This unit is designed to record and play back programmes based on the PAL colour system. Programmes based on the SECAM colour systems is transferred to the PAL colour systems on this unit.

Location of Parts and Controls

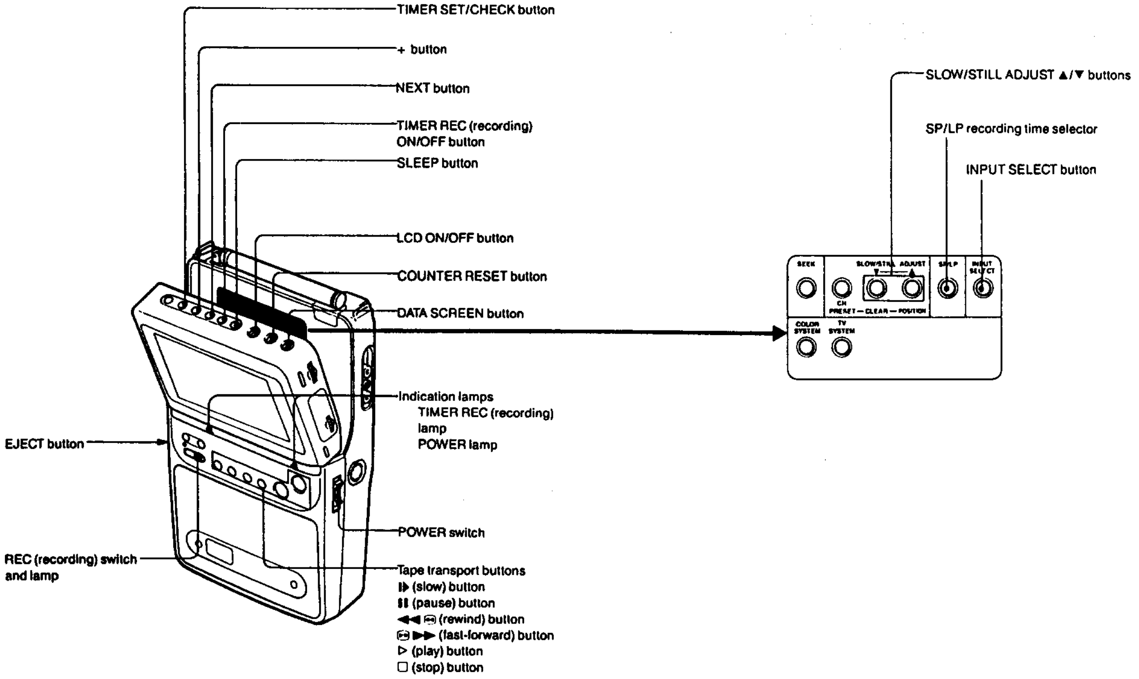
Parts used for watching TV programmes


CLOCK SET button
+ button
NEXT button
SLEEP (sleep timer) button
Telescopic aerial
BATT (battery eject) knob
Battery mounting surface
DATA SCREEN button
LCD ON/OFF button
POWER lamp
PROGRAM −/+ buttons

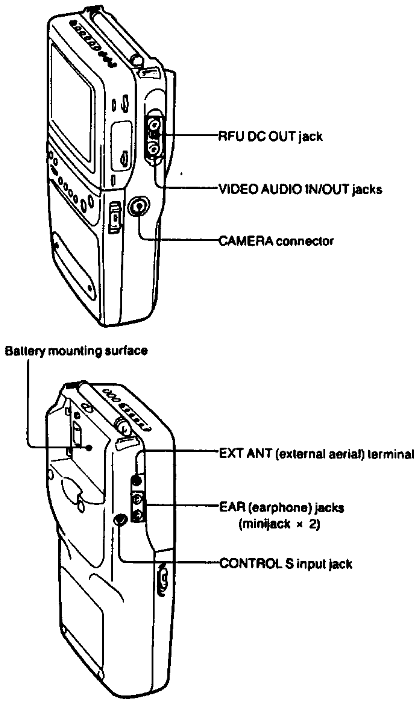

BRIGHT (brightness) control
COLOR control
VOLUME control
POWER switch
INPUT SELECT button
Lithium battery compartment
CLEAR button
POSITION button
SEEK
SLOW/STILL ADJUST
SP/LP
INPUT SELECT
CH PRESET
CLEAR
POSITION
COLOR SYSTEM
TV SYSTEM
SEEK button
COLOR SYSTEM button
TV SYSTEM button
CH PRESET button

You can adjust the angle of the screen (max. 60°).

Parts used for VTR playback/recording

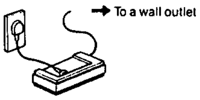
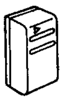
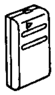
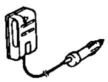
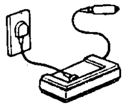

TIMER SET/CHECK button
+ button
NEXT button
TIMER REC (recording) ON/OFF button
SLEEP button
LCD ON/OFF button
COUNTER RESET button
DATA SCREEN button
Indication lamps
TIMER REC (recording) lamp
POWER lamp
EJECT button
POWER switch
REC (recording) switch and lamp
Tape transport buttons
▶ (slow) button
II (pause) button
◀◀ (rewind) button
▶▶ (fast-forward) button
▷ (play) button
□ (stop) button
SLOW/STILL ADJUST ▲/▼ buttons
SP/LP recording time selector
INPUT SELECT button
SEEK
SLOW/STILL ADJUST
SP/LP
INPUT SELECT
CH
PRESET — CLEAR — POSITION
COLOR SYSTEM
TV SYSTEM

Parts used for connection


RFU DC OUT jack
VIDEO AUDIO IN/OUT jacks
CAMERA connector
Battery mounting surface
EXT ANT (external aerial) terminal
EAR (earphone) jacks (minijack × 2)
CONTROL S input jack

Power Sources

Selection of Power Sources

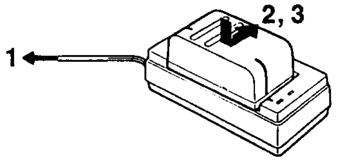
Place	Power sources	Page
Indoors	AC power adaptor AC-V30 (supplied)  To a wall outlet	16
Outdoors	Battery pack NP-66H (supplied), NP-77H or NP-77  NP-55 	12
In the car	DC pack DCP-77  Car battery charger/ adaptor DC-V30 	17

The above accessories, except for the AC-V30 and NP-66H, are not supplied.

Disconnecting the power source during recording or playback operations may damage the cassette tape. If it should happen, supply the power again immediately and turn the power on.

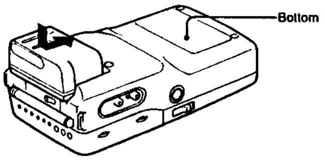
Using with Battery Pack — NP-66H, NP-77H, NP-77 or NP-55

1 First, charge the battery pack.
Use the supplied AC-V30 AC power adaptor.



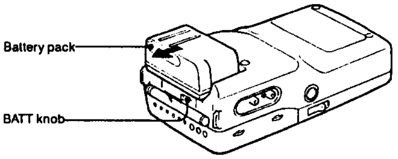
1 Connect the AC-V30 to a wall outlet.
2 Install the battery pack.
Align the right side of the battery pack with the line on the AC power adaptor.
3 While pressing the battery pack, slide it in the direction of the arrow.
The POWER lamp (green) and the CHARGE lamp (orange) on the AC-V30 light up.
The charging begins. (See page 13.)
When the charging is completed, the CHARGE lamp goes out.
Unplug the unit from the wall outlet and the POWER lamp goes out.

2 Attach the battery pack to the video TV recorder.
Align the battery pack with the white line on the video TV recorder, then while pressing, slide the battery pack in the direction of the arrow.



- You cannot charge the battery pack while the AC power adaptor supplies power to the unit.
- You can use the BC-55 or AC-V55 battery charger/AC power adaptor for charging an NP-66H, NP-77, NP-55 or NP-77H.

To remove the battery pack



While sliding the BATT knob in the direction of the arrow, slide the battery pack as illustrated.

Charging time

NP-66H	NP-77H	NP-77	NP-55
100 min.	140 min.	120 min.	60 min.

(When AC-V30 is used.)

Operating time

A fully-charged battery pack can operate this unit as follows:

	LCD ON/OFF	NP-77H	NP-77	NP-66H	NP-55
Watching TV programmes	ON	Approx. 130 min.	Approx. 110 min.	Approx. 100 min.	Approx. 55 min.
VTR playing back	ON	Approx. 120 min.	Approx. 100 min.	Approx. 90 min.	Approx. 50 min.
TV programme recording	ON	Approx. 95 min.	Approx. 75 min.	Approx. 70 min.	Approx. 40 min.
TV programme recording	OFF	Approx. 140 min.	Approx. 120 min.	Approx. 105 min.	Approx. 60 min.
Camera recording *	OFF	Approx. 100 min.	Approx. 80 min.	Approx. 75 min.	Approx. 40 min.

* When connecting the colour video camera CCD-G100E (not supplied).

Using the Battery Pack Efficiently

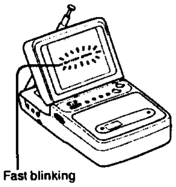
How to prepare the rechargeable battery packs

Have sufficient battery pack power to perform 2 or 3 times the amount of recording that you plan to do.
"Battery life" as indicated in the instruction manual or catalogue of the video TV recorder is measured by the continuous use of the video TV recorder, at room temperature, using a fully charged battery.
Fast winding or rewinding tape operations consumes much more battery power than normal tape transport operation. Consequently, battery life becomes shorter when these operations are performed frequently.

Battery life is shorter in a cold climate.
Cold climates reduce the efficiency of a battery and cause it to run out more quickly.

When to replace the rechargeable battery pack

When the battery pack is exhausted, the POWER lamp (during recording, the "BATTERY DOWN" indication on the screen as well) starts blinking slowly about five minutes before the battery pack is discharged. (When this happens, some of the indications may not appear on the screen.)
Replace the battery when the blinking changes from slow to fast, and the "BATTERY DOWN" indication starts blinking rapidly.
Turn off the power of the video TV recorder before replacing the battery. While replacing the battery, keep the cassette inside the cassette holder. When the battery has been replaced, recording can be resumed smoothly without any picture distortion.



Notes on battery exhaustion when a camera is connected
When the battery is exhausted, the tally lamp (red) displayed in the viewfinder of the camera starts blinking, and the power goes off automatically. Replace the battery pack with a fully charged one when the blinking starts.

Notes on charging

Before using the battery pack, charge it sufficiently. A brand-new battery pack is not charged.
Recharge the battery pack when it is fully exhausted.
- If the operation is completed before the BATTERY DOWN indication on the screen or POWER lamp starts blinking, it is recommended that you discharge the battery pack by playing back a tape until BATTERY DOWN or POWER lamp starts blinking rapidly.
- Do not recharge the battery pack before it has been discharged completely. Repeated charging while some capacity remains will reduce the battery capacity. However, the original battery capacity can be recovered if you fully discharge and fully charge the battery pack again.

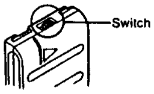
Keep the terminals clean

If the terminals (metal parts on the back) are soiled, the battery life will become shorter. When the terminals are soiled, or when the battery pack has not been used for a long time, repeatedly attach and remove it several times. This will improve the contact of the battery pack and the video TV recorder. Also, wipe the + and − terminals with a soft cloth or paper.

Notes on the rechargeable battery pack

Battery pack care
- Remove the battery pack from the video TV recorder after use, and keep it in a cool place. When the battery pack is installed on a video TV recorder, a small amount of current flows to the recorder even if the POWER switch is turned off. This causes over-discharge and, consequently, shortens the life of the battery.
- The battery pack is always discharging - even when it is not in use. Thus, the battery should be charged before each use.

How to use the switch on the battery pack
Use this switch as a reminder of the charging condition. Set the switch to the "no mark" position when the charging is completed. Set the switch to the "red mark" position when the battery has been discharged.



How many times can the battery pack be recharged
It can be fully charged and discharged about 500 times under normal temperatures. If the BATTERY DOWN indication blinks rapidly just after turning on the recorder, even though a fully charged battery pack has been installed, replace the battery pack with a brand new one.

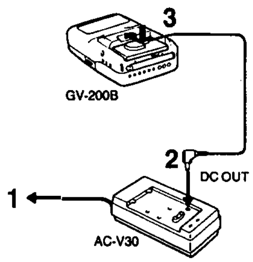
Charging temperature
Lower temperatures require a longer charging time.
Charging under a temperature ranging from 10°C to 30°C (50°F to 86°F) is recommended.

Why the battery pack heats.up
While the battery pack is being charged or used, a chemical change occurs inside the battery pack which generates electric energy. Consequently, the battery pack becomes warm, but this is not dangerous.

Carrying the battery pack
If the + and − terminals are short-circuited with a piece of metal, the battery heat up abnormally. This is very dangerous. Never put an uncovered battery pack in a pocket together with a key holder or other metal object.

If the battery pack is not used for a long time (about 1 year)
Charge it again, but in this case the battery life will be shorter than normal. After several charging and discharging cycles, the battery life will recover its original capacity.

Using with AC Power Adaptor — AC-V30



1 Connect the AC power adaptor to a wall outlet.

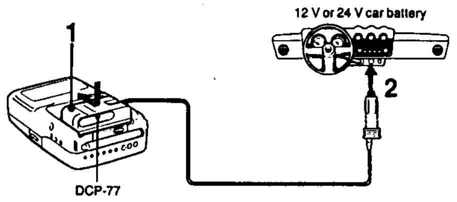
2 Insert the plug into the DC OUT jack.

3 Align the left side of the connecting plate with the white line on the video TV recorder, and while pressing it, slide in the direction of the ▶ mark.

To remove the connecting plate
While sliding the BATT knob, slide out the connecting plate.

Notes
- The unit is not disconnected from the AC power source as long as it is connected to the wall outlet.
- While the unit is in use, particularly during charging, keep it away from AM receivers and video equipment because it will disturb AM reception and video operation.

Using This Unit with a Car Battery — DCP-77



1 Attach the DC pack to the video TV recorder.

2 Connect the plug to the cigarette lighter socket.

Notes
- Connect the DCP-77 only to a car with a negative ground car batteries of 12 V or 24 V.
- Attach or remove the DC pack in the same way as the battery pack.
- Be careful not to let any metal object touch the metal projection on the battery pack. When the battery pack is not used, keep it in its case.
- Keep the video TV recorder away from the power source. If not, noise may appear on the screen.

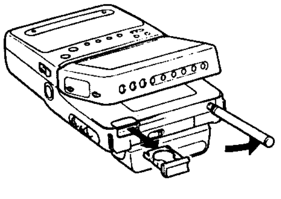
Notes on using this unit in a car
- For your safety, do not watch the TV or operate the controls while driving.
- Avoid leaving the unit in a place with very high temperatures. If you do, it may cause distortion of the cabinet or malfunction of the unit.
- If you use this unit while your car is not in use, the car battery will be consumed. Avoid using this unit in such condition for more than 12 hours.

Setting the Clock

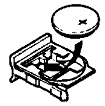
Before you set the clock, install a lithium battery. With a lithium battery installed, this unit powers the clock and keeps the last channel in memory when the power source is disconnected.

Inserting a Lithium Battery

1 Pull out the lithium battery compartment.

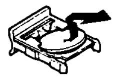


2 Install the supplied CR2032 lithium battery with the + side facing out.



3 Reinsert the compartment.

To remove the lithium battery
Press the battery upward and remove it as illustrated.



Lithium battery life

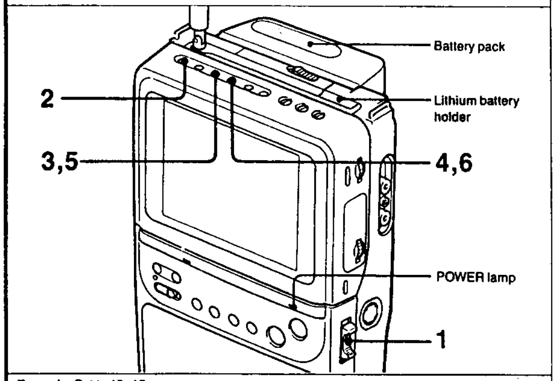
Approximately one year in normal operation.
If the lithium battery becomes weak, the 0:00 indication appears on the screen when you press the DATA SCREEN button, and the clock does not operate. In this case, replace the battery with a Sony CR2032 lithium battery. Use of another battery may present a risk of fire or explosion. After replacing the battery, reset the clock.

Cautions
- Keep the lithium battery out of the reach of children.
  Should the battery be swallowed, consult a doctor immediately.
- Before use, wipe the battery with a dry cloth to assure a good contact.
- Be sure to observe the correct polarity when installing the battery.
- Do not hold the battery with metallic tweezers, otherwise a short-circuit may occur.
- Do not break up the battery or throw it into a fire because it may explode. Carefully dispose of the used batteries.

Warning
Battery may explode if mistreated. Do not recharge, disassemble or dispose of in fire.

Setting the Clock

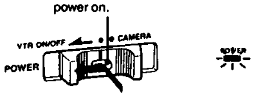
Before setting
Make sure that the power source is connected correctly.


Battery pack
Lithium battery holder
2
3,5
4,6
POWER lamp
1

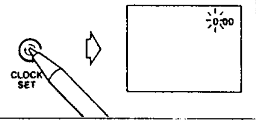
Example: Set to 13:15

1 Turn the power on.
The POWER lamp lights up.

While pressing the green button, slide the POWER switch to the left to turn the power on.

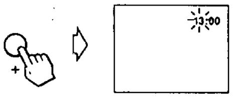

VTR ON/OFF
CAMERA
POWER
POWER

2 Press the CLOCK SET button with a pen or similar.
The screen will enter the time setting mode.
The screen becomes dark.
The next item to be set blinks.

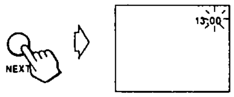

CLOCK SET
0:00

3 Set the hour.
Press the + button repeatedly until you get the desired setting.

If you keep the button pressed, the indication will advance continuously.

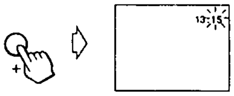


4 Press the NEXT button.

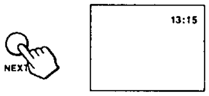


5 Set the minute.
Press repeatedly until you get the desired setting.

If you keep the button pressed, the indication will advance continuously.



6 Press the NEXT button.
The clock starts.
The screen goes back to the normal brightness.



If the lithium battery is not installed and the power source is disconnected after setting the time
When DATA SCREEN is pressed and the time is displayed, "0:00" appears and the clock does not gain.

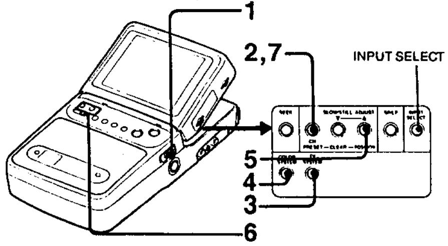
Presetting TV Channels

Your receiver is capable of receiving the channels listed below. Up to 60 channels can be allocated to any desired programme position.

Channel coverage	VHF channel	UHF channel	CATV channel
PAL	E2-E12	21-69	S01-S20
SECAM	5-10	21-69	B-Q

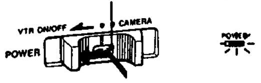
To Preset Channels

Before you start presetting, pull out the telescopic aerial or connect an external aerial.

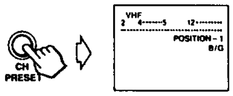

1
2,7
INPUT SELECT
5
4
3
6

1 Turn the power on.
The POWER lamp lights up.
If the TV programme is not displayed, press the INPUT SELECT button.

While pressing the green button, slide the POWER switch to the left.


VTR ON/OFF
CAMERA
POWER
POWER

2 Press the CH PRESET button.


CH PRESET
VHF
2 4------5 12-------
POSITION - 1
B/G

3 Press the TV SYSTEM button to select the TV system in your area.
The indication changes as follows:

B/G → L → I

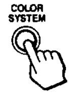
L : France
I : UK/Ireland
B/G: Other western European countries

Note
If the TV system is not selected correctly, the sound will be poor or noise may be heard.

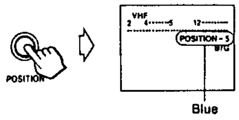
4 Press the COLOR SYSTEM button to select the auto mode (no indication).
However, when you select B/G in step 3, and the signal is too weak or the picture is distorted, select PAL.

Auto (no indication) → PAL

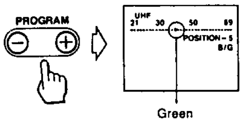
Note
When you receive the DDR SECAM, select the auto mode.


COLOR SYSTEM

5 Press the POSITION button to select the desired programme position where the channel is to be stored.

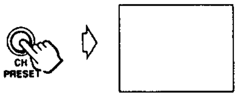

POSITION
VHF
2 4------5 12-------
POSITION - 5
B/G
Blue

6 Press the PROGRAM –/+ buttons repeatedly to select the channel to be stored.
The UHF channel range is displayed after the VHF range*.
Repeat steps 5 and 6 for other channels to be preset.


PROGRAM
UHF
21 30 50 69
POSITION - 5
B/G
Green

7 Press the CH PRESET button.
Channel presetting is completed.

The on-screen display disappears.



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* After the channel range is displayed, wait for about 2 seconds before next operation.

Programme scanning on your video TV recorder
When the PROGRAM + button is pressed, the channels are scanned in the following order.
When the PROGRAM – button is pressed, the scanning order is reversed.

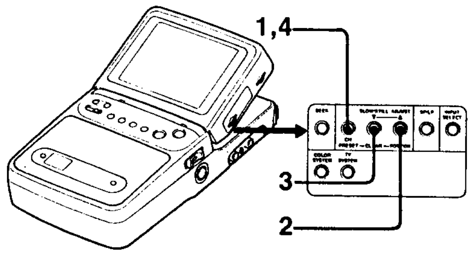
[B/G, I] VHF (E2-E4) → CATV (S01-S10) → VHF(E5-E12) → CATV(S11-S20) → UHF(E21-E69)

[L] CATV (B-F) → VHF (5-10) → CATV (K-Q) → UHF (21-69)
CATV (G-J)

To change the order of the channel to be stored
Follow the steps on page 22.

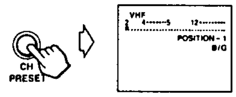
To Erase Channels

The erased programme position is skipped when you press the PROGRAM +/– button.

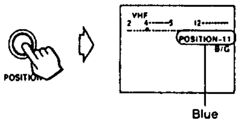


Example: To erase programme position 11

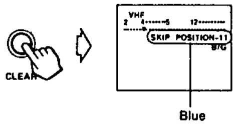
1 **Press the CH PRESET button.**


CH
PRESET
VHF
2 4——5 12——
POSITION - 1
B/G

2 **Press the POSITION button and select the programme position to be erased.**

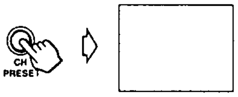

POSITION
VHF
2 4——5 12——
POSITION-11
B/G
Blue

3 **Press the CLEAR button.**
The SKIP indication appears.


CLEAR
VHF
2 4——5 12——
SKIP POSITION-11
B/G
Blue

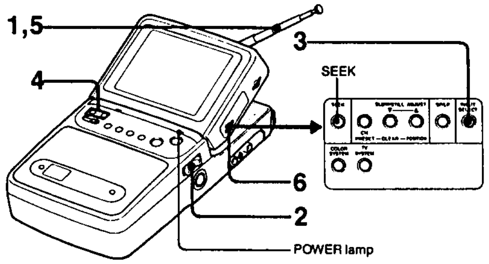
Repeat steps 2 and 3 for other programme position to be erased.

4 **Press the CH PRESET button.**
The on-screen display disappears.



To add the erased channels again
See "To Preset Channels" on page 22.

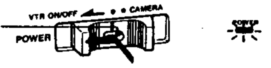
Watching TV Programmes


1,5
4
3
SEEK
6
2
POWER lamp

1 **Pull out the aerial fully.**
Be sure to pull out the base of the aerial.
If you have connected an external aerial or CATV cable, be sure to fold in the telescopic aerial.

2 **Turn the power on.**
The POWER lamp lights up.

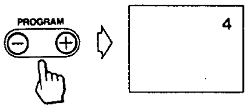
While pressing the green button, slide the POWER switch to the left.


VTR ON/OFF
CAMERA
POWER
POWER

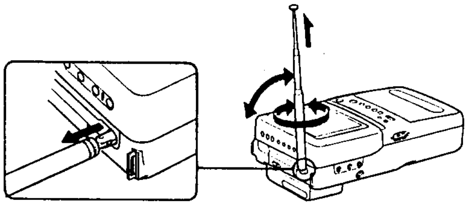
3 **If a TV programme is not displayed, press the INPUT SELECT button.**
The display will change as follows:
TV programme → LINE
LINE → CAMERA
CAMERA → TV programme

INPUT
SELECT

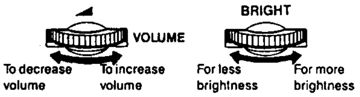
4 **Select the desired programme.**
Press + for higher-numbered programmes and – for lower-numbered programmes. The programmes will appear in numerical sequence. Press PROGRAM +/– repeatedly until you get the desired programme on the screen.



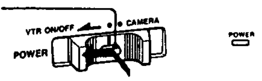
5 **Adjust the aerial for the best reception.**



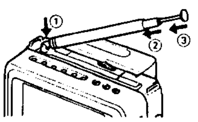
6 **Adjust the volume and brightness.**


VOLUME
BRIGHT
To decrease volume
To increase volume
For less brightness
For more brightness

To turn off the TV
While pressing the green button, slide the POWER switch to the left. The POWER lamp goes out.


VTR ON/OFF
CAMERA
POWER
POWER

To put the aerial away
Slide in the base of the telescopic aerial first, then the center and the point.



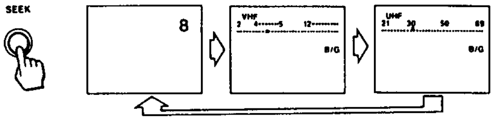
To View a TV Programme Without Presetting Channels

When you do not know the channel number of the TV programme you wish to view or if you want to use the unit in the moving car, search for the programme as follows.

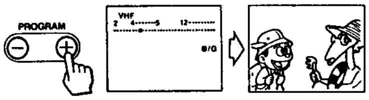
1 Press the SEEK button.
The channel range display appears.
Each time you press the button, the receiving channels changes as follows:

VHF → UHF → normal display

Notes
- To change the TV system, press the TV SYSTEM button after pressing the SEEK button.
- When B/G is received, press the COLOR SYSTEM button and select PAL, if necessary.



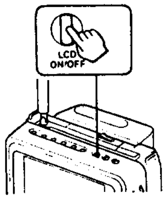
2 Press the PROGRAM +/– buttons to select the channel.



After selecting the channel, the channel range display goes out after a few seconds.

To clear the screen

Press the LCD ON/OFF button.
The screen will be cleared.



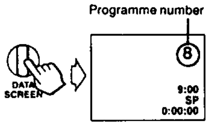
It is recommended that you clear the screen when you view the playback picture with another TV or monitor. The picture noise of the TV or monitor is reduced. Battery life will also last longer if you use the unit with the picture turned off. To restore the picture on this unit, press LCD ON/OFF again.

Note
When no picture is displayed and the volume is low, or the earphones are connected, the unit seems to be turned off though it is not. Be sure to turn off the unit with the POWER switch when it is not in use.

To display the programme number

Press the DATA SCREEN button.

Press the DATA SCREEN button again to turn off the display.
When the SEEK button is pressed, the VHF or UHF channel range is displayed instead of the programme number. The display is cleared after a few seconds.

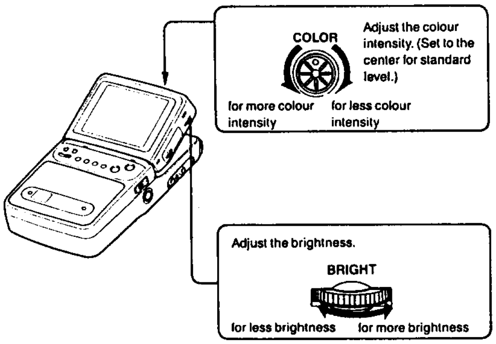


"Last channel" memory function
- While you are watching TV programmes, if the power source is disconnected or the battery pack becomes exhausted, the unit turns off with the last channel being memorized. When you turn on the unit again, the last channel appears on the screen. The lithium battery must be installed for this function.
- The last channel memory function also works when the TV signal is cut off, for example, when you go through a tunnel in a moving car.
- If the lithium battery becomes exhausted but the power source is connected, the last channel is memorized.

Adjusting the Picture and Sound

Adjust the picture and sound to your preference.

To adjust the picture



Adjust the colour intensity. (Set to the center for standard level.)

Adjust the brightness.

Using the SLEEP Timer

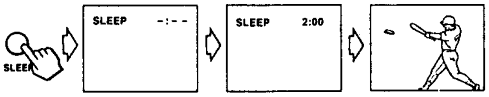
You can set the unit to turn off automatically after a certain amount of time. You can set the turn-off time as follows. This timer activates while viewing a TV programme, video playback, or while recording.
Each time you press the SLEEP button, the display will change as follows:

-:-- → 0:30 → 1:00 → 1:30 → 2:00 → 2:30
↑ ↓
5:00 ← 4:30 ← 4:00 ← 3:30 ← 3:00

Example: To turn off the TV after 2 hours

1 Make sure the clock is set correctly (page 18).
No indication will appear on the screen if the clock is not set.

2 Select the desired time interval by pressing the SLEEP button.

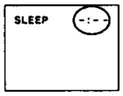


The screen becomes dark.
The normal display will be restored after a few seconds.

The TV will be turned off after 2 hours.
The procedure is the same for tape playback and recording. The tape will stop running after the selected time interval.

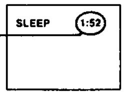
To cancel the SLEEP timer

Press the SLEEP button repeatedly until the "-:--" display appears.
The SLEEP timer can also be canceled by turning off the unit with the POWER switch.



To check the remaining time

Press SLEEP once.
The remaining time is displayed.
The indication is cleared after a few seconds.

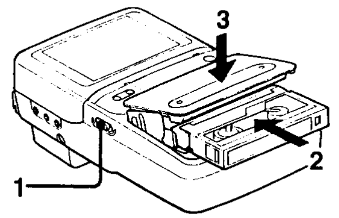


The unit will be turned off after about 1 hour and 52 minutes.

Note
When you use the unit with rechargeable batteries, the unit may turn off before the selected time because the batteries are exhausted.

Inserting a Cassette

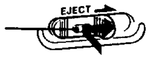
Make sure that the power source is connected to the unit.



To insert a cassette

1 Open the cassette holder with the EJECT button.

While pressing, slide the button to the right.



2 Insert the cassette with the window side facing up.

3 Close the cassette holder.

When you slide the EJECT button, power is supplied and the cassette holder opens even if the power is turned off. When the cassette holder opens, the power is turned off automatically. Slide POWER if you want to continue operation after closing the cassette holder.

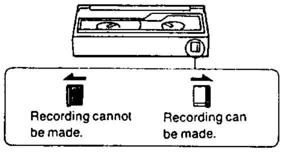
To eject a cassette

Slide the EJECT button. Make sure the tape is not running.

Note
Do not open the cassette holder while the unit is in the vertical position. If you do, the cassette may fall out of the holder and be damaged.

To Prevent Accidental Erasure

When a new recording is made on a previously recorded tape, the previous recording is automatically erased. To protect a recording, slide the red safety tab out to cover the opening.



Notes on opening and closing the cassette holder

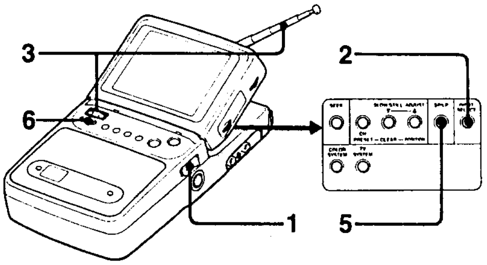
- Do not insert your finger into the cabinet when the cassette holder is open.
- Be careful not to get your finger caught in the cassette holder.

Notes on the cassette

- Store cassettes in their cases when they are not being used and keep them in an upright position to prevent intrusion of dust and uneven winding.
- Always insert the cassette in the correct position.
- Never insert anything in the small holes on the rear of the cassette.
- Remove the cassette from the video TV recorder when not in use.

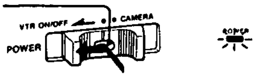
Recording TV Programmes

You can record a TV programme while viewing it. For optimal picture and sound quality, connecting an external aerial is recommended. (See page 45.)



1 Turn the power on.
The POWER lamp lights up.

While pressing the green button, slide the POWER switch to the left.



2 If the TV programme is not displayed, press INPUT SELECT button.
The display will change as follows:

TV programme → LINE
↑ CAMERA ←┘

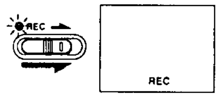
INPUT SELECT

3 Select the desired TV channel. (See page 27.)
Adjust the telescopic aerial for the best reception. (See page 27.)

4 Insert the cassette. (See page 32.)

5 Select the recording mode, SP or LP.
The recording time of a cassette in the LP mode is twice as long as that in the SP mode. For better picture and sound quality, set to SP.

6 Slide the REC switch to the right.
Recording starts.



To stop recording for a moment
Press ❚❚.

To resume recording
Press ❚❚ again.
(If you do not press the ❚❚ button again for about 5 minutes, the pause mode will be released automatically and the unit will stop. This is to protect the video heads.)

To stop recording
Press ☐.

When the tape is recorded to the end
The tape stops automatically, but the unit is not turned off. If you are not going to continue operation, turn the power off with the POWER switch.

About the recorded sound
The VOLUME control setting has no effect on the recording level.

Changing the channel during recording

Set the unit in the recording pause mode and then select another channel. You cannot watch another programme while recording.

When recording from the beginning of a tape

Run the video TV recorder for about 15 seconds at the beginning of a cassette before recording. This will prevent missing the starting point or having any previously recorded pictures appear when playing back on another video cassette recorder.

Recording/playback time

You can select two tape speeds with the SP/LP selector.
The recording time in the LP mode is twice as long as that in the SP mode. For better picture and sound, recording in the SP mode is recommended. During playback, the mode in which the tape was recorded is selected automatically.

Cassettes and their recording time

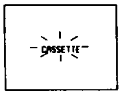
There are two formats for 8mm video recording, PAL and NTSC. Video cassette tapes are made to correspond to one of these formats. Use PAL format cassette tapes for this unit. You will find "P5" on the package of PAL cassettes.
In some countries, however, only NTSC format cassette tapes with "P6" on the packages are available. If a NTSC format cassette is used with this unit, the actual recording time may differ from the recording time indicated on the cassette.

Note
If you record with this unit on a tape that has been recorded in the PCM mode, and if you play back this tape on a VTR with PCM function, the sound may be cut off occasionally. In this case, set the audio monitor switch of the VTR to the standard position.

To stop recording automatically after a certain time — Quick timer

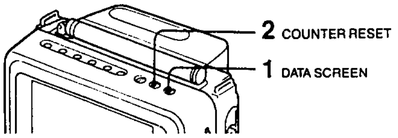
Press the SLEEP button during recording. You can leave the unit function when you go to bed or when you go out, etc.
The unit will be turned off automatically at the preset time. For operation, see page 31.

Are you having trouble?

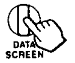
Symptom		Possible cause	Correction
"CASSETTE" indication is displayed when you slide the REC switch.		The safety tab on the cassette is slid out.	Slide the tab in or use a new cassette.
		The tape is at its end.	Rewind the tape or use a new cassette.
		No cassette is inserted.	Insert a cassette.

Using the Tape Counter

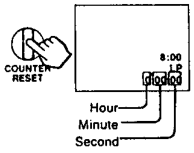
During recording or playback, the digits on the counter indicate the actual recording or playback time.
By noting the counter reading at a particular point, you can easily find that point later by referring to the tape counter.



1 **Press DATA SCREEN so that the counter is displayed.**



2 **During recording or playback, press COUNTER RESET at the point you later want to locate.**
The counter will be set to 0:00:00.



Use the counter to find this point later.

Notes
- The counter reading and the point on the tape may not correspond exactly. Use the counter as a guide.
- There will be a time lag of several seconds on the counter reading after repeated fast-forward and rewind operations.
- There will also be a time lag of several seconds when a tape recorded in both the LP or SP modes or a tape having a blank portion between the recorded portions is played back.

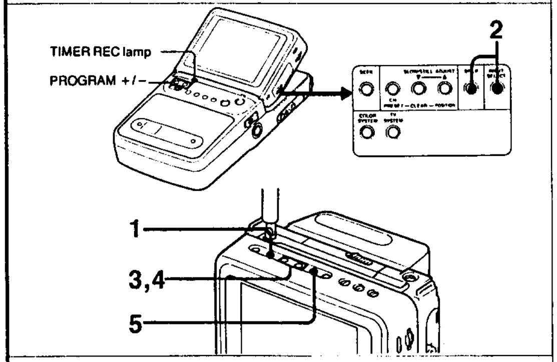
To Start Recording at the Desired Time

A TV programme within 24 hours can be preset for timer-activated recording. For better recording of picture and sound, use of an external aerial is recommended. See page 45.

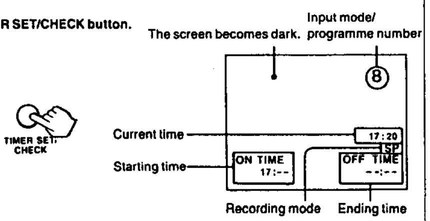
Before setting the timer

- Make sure that the power is supplied. (Is the battery pack fully charged? For long recording, use of the AC power source is recommended.)
- Set the clock (see page 18.)
- Insert a cassette (see page 32.) Make sure that the safety tab is slid in.

Example: To record the programme from 20 : 30 to 21 : 45.



1 **Press the TIMER SET/CHECK button.**

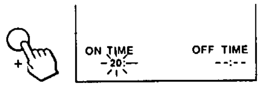


2 **Select the input mode with the INPUT SELECT button, and the recording mode with the SP/LP button.**
For TV programme recording, select the desired channel by pressing the PROGRAM +/− buttons.

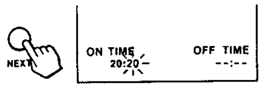
INPUT SELECT
SP/LP

3 **Set the time for the recording to begin.**

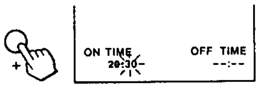
1) Press the + button to set the hour.
Each time you press the + button, the hour indication increases by one. If you keep the button pressed, the indication will increase continuously.



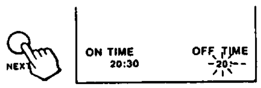
2) Press the NEXT button.



3) Press the + button to set the minutes.
Each time you press the + button, the minutes indication increases by one.
If you keep the button pressed, the indication will increase continuously.



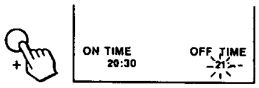
4) Press the NEXT button.
The starting time is now set.



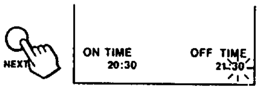
⇩ To be continued

4 Set the time for the recording to stop.

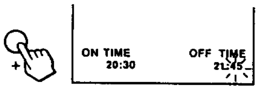
1) Set the hour with the + button.



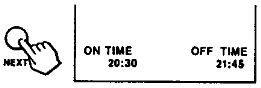
2) Press the NEXT button.



3) Set the minute with the + button.

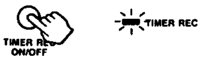


4) Press the NEXT button.
The ending time is now set.
The on-screen display disappears.



If you have made a mistake
Turn the power off, then on again.
Repeat steps from 1 to 4.

5 Press the TIMER REC ON/OFF button.
The power is turned off and the TIMER REC lamp lights up (timer-activated recording standby mode). The recording starts automatically at the preset start time and the power is turned off at the preset end time.



Notes

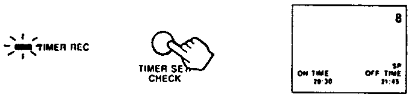
- During timer-activated recording, both picture and sound will be muted. To listen to the sound and watch the picture, press the LCD ON/OFF button.
- When you press the TIMER REC ON/OFF button, the "CASSETTE" indication will appear if the safety tab on the cassette is slid out or if no cassette is inserted.

To stop the timer-activated recording

Press the TIMER REC ON/OFF button again.
The TIMER REC lamp goes out.

To check the setting

Press the TIMER SET/CHECK button while the TIMER REC lamp is lit.
The power is turned on and the starting and ending time is displayed for a few seconds.



To change the timer setting after completing the setting

Press the TIMER REC ON/OFF button to cancel the timer recording mode, then turn the unit on and set the timer again.

To set the timer while the tape is running

You can set only the starting and ending time during playback or recording. After stopping the tape, set the recording mode (SP/LP) and programme number, and then press the TIMER REC ON/OFF button.

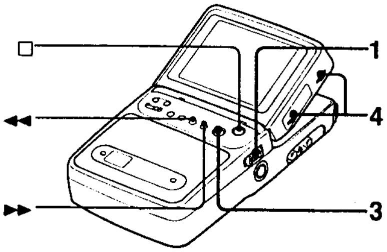
If a power interruption occurs when the unit is connected to the AC power source

Recording stops. Recording starts again after the power is resupplied. When a power interruption occurs during the timer-activated recording standby mode and the power is resupplied, the timer settings will not be affected as long as the lithium battery is installed.

To record to the end of the tape

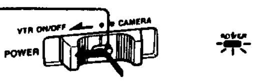
Set the starting and ending time the same. When the tape reaches the end, recording will stop and the power is turned off.

Playing Back the Recorded Tapes



1 Turn the power on.
The POWER lamp lights up.

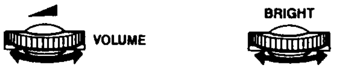
While pressing the green button, slide the POWER switch to the left.



2 Insert a recorded tape (see page 32.)

3 Press ▷ to start playback.

4 Adjust the volume and the brightness.



To decrease volume To increase volume

For less brightness For more brightness

To stop playback Press the □ button.
To rewind the tape Press the ◀◀ button.
To advance the tape Press the ▶▶ button.

To rewind the tape and play it back automatically — Auto play

While pressing the ◀◀ button, press the ▷ button.
The "AUTO PLAY" indication appears.

To clear the screen

Press the LCD ON/OFF button. To restore the picture, press the LCD ON/OFF button again.

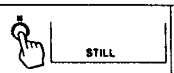
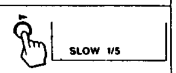
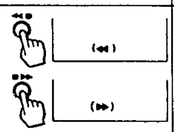
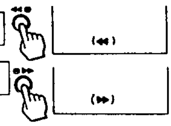
To adjust the picture

Adjust the BRIGHT and COLOR controls (see page 30.)

To stop playback at the desired time

Use the SLEEP function.
You can have the unit turned off at the preset time. (see page 31.)

Various Playback Modes — CRYSTAL-CLEAR still/slow/picture search

To stop the tape for a moment — Still picture	During playback 	To resume normal playback, press ▷. These modes will be automatically released after the following time intervals: Still: 5 minutes Slow*: 1 minute.
To view the slow playback picture	During playback 	
To locate a particular point while viewing the picture — Picture search	During playback During playback 	When you release the button, the unit will return to the previous mode.
To view the picture at high speed — FR picture search	While rewinding While fast forwarding 	

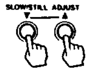
* After normal playback is resumed, the I▶ button will not function for about 5 seconds.

If streaks appear in the still and slow playback mode

Adjust the picture as follows:

1 **Play back the slow motion picture.**

2 **Press the SLOW/STILL ADJUST ▼, ▲ buttons to adjust the picture so that the noise does not appear.**



To adjust the upper portion of the picture, press the ▲ button. To adjust the lower portion of the picture, press the ▼ button. The still picture is adjusted at the same time.

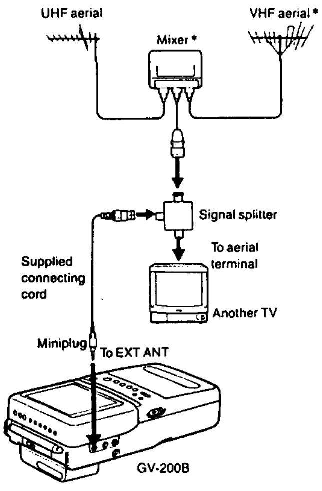
When the playback picture is viewed on another TV or monitor

The horizontal bands appear in the still, slow, picture search and FR picture search modes. Noise appears in the still and slow modes. To reduce the horizontal bands, press LCD ON/OFF button to mute the picture of this unit.

Notes on the CRYSTAL-CLEAR still/slow/picture search on LCD
Noiseless pictures can be viewed in the still, slow and picture search modes, owing to the characteristics of the liquid crystal.

Connecting an Outdoor Aerial

If you cannot obtain satisfactory reception with the telescopic aerial, or when recording TV programmes, use an outdoor aerial.



*The mixer and the VHF aerial are not necessary in the United Kingdom as only UHF is available.

Notes

- Before connecting the aerials, turn off the unit.
- Make connections firmly. A loose connection may cause a distorted picture.
- When using the unit in a car, use a commercially available car aerial, etc. For details, refer to the instruction manual of the car antenna.

Connecting Other VTRs or Monitors

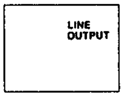
Notes on the VIDEO/AUDIO IN/OUT Jacks

The VIDEO/AUDIO IN/OUT jacks are automatically set to the input or output jacks according to the operating condition of the unit.

Refer to the following diagram:

Mode selected with INPUT SELECT button	Stop or recording mode	Playback mode
TUNER (TV programme)	output	output
LINE*	input	output
CAMERA	output	output

* When the LINE mode is selected with INPUT SELECT, the INPUT or OUTPUT indication appears with LINE.

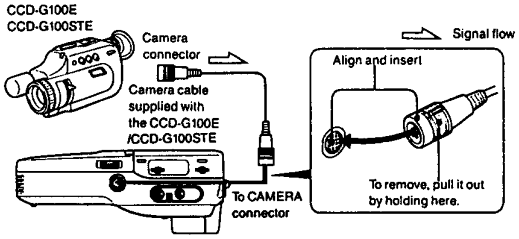


Note
When the LINE OUT jacks of other equipment are connected to the VIDEO/AUDIO IN/OUT jacks on this unit, and signals are output from the jacks of the other equipment to this unit, the picture and sound of the other equipment may be disturbed.
Turn off the power of this unit or disconnect the connection between this unit and another equipment.

Camera Recording — Controlling from the Camera

By connecting a Video Camera CCD-G100E or CCD-G100STE (not supplied), you can control the recording from the camera. You can hold the camera and keep this unit in a carrying case while recording.
For details, refer to the instruction manual of the video camera.

Connection


CCD-G100E
CCD-G100STE
Camera connector
Camera cable supplied with the CCD-G100E /CCD-G100STE
To CAMERA connector
Signal flow
Align and insert
To remove, pull it out by holding here.

- Select the recording mode (SP/LP).

Recording with CCD-G100E

1 **Set the POWER switch of this unit to CAMERA.**
While pressing the green button, slide to the right.

2 **Insert the cassette**

3 **Set the STANDBY switch of the camera to STANDBY.**
The power of this unit is turned on, and the POWER lamp lights up. To have the picture on the screen of this unit, press LCD ON/OFF button.

4 **Start recording.**
Press the START/STOP button of the camera.

To stop recording for a moment
Press the START/STOP button. Press it again to start recording.

To stop recording
Set the STANDBY switch to LOCK.

For CCD-G100STE
Operation is the same as CCD-G100E. The sound is recorded in monaural.

For CCD-G1E
You can connect CCD-G1E to this unit. However, you can control only recording/recording pause mode switching on the camera. Control the power on/off and recording stop operations on GV-200B.

Playing back the newly recorded pictures

1 **Turn the power on of this unit.**
The POWER lamp lights up.
While pressing the green button, slide to the left.

2 **Press ◀◀ button of this unit to rewind the tape.**

3 **Press □ button of this unit.**

4 **Press ▷ button of this unit.**

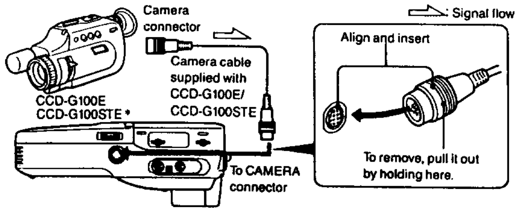
Caution
Do not operate this unit for a long time when it is in a carrying case like the one supplied. Internal heat build-up may occur which can cause this unit to malfunction.

When the POWER switch is set to CAMERA, the operable buttons are:
POWER switch, EJECT button, LCD ON/OFF button, DATA SCREEN button, COUNTER RESET button, and SP/LP button.

Camera Recording — Controlling from This Unit

By connecting the video camera CCD-G100E or CCD-G100STE (not supplied), you can record with this unit while using the camera in a distant place. For details, refer to the instruction manual of the video camera.

Connection



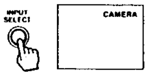
Camera connector
Signal flow
Align and insert
Camera cable supplied with CCD-G100E/ CCD-G100STE
CCD-G100E
CCD-G100STE *
To CAMERA connector
To remove, pull it out by holding here.

• Select the recording mode (SP/LP).

Recording

1 **Turn the power on of this unit.**
The POWER lamp lights up.
While pressing the green button, slide the POWER switch to the left.

2 **Press the INPUT SELECT button of this unit to display "CAMERA" on the screen.**
The picture to be recorded appears on the screen. If the focus or colour need adjustments, adjust them on the camera. To have the picture disappear, press the LCD ON/OFF button.



3 **Slide the REC switch of this unit.**
Recording starts.

To stop recording for a moment
Press ‖ button of this unit.

To stop recording
Press □ button of this unit.

* You can also use the CCD-G1E.

Playing back the newly recorded pictures

1 **Press ◀◀ button to rewind the tape.**

2 **Press □ button.**

3 **Press ▷ button.**

Recording with a camera from a distant place

Use the optional pan tilter HVR-200 for camera recording from a distant place, a maximum distance of 5m.

To listen to the sound that is being recorded
While recording, no sound is heard from the speaker. Connect the supplied earphone to the EAR jack to listen to the sound.

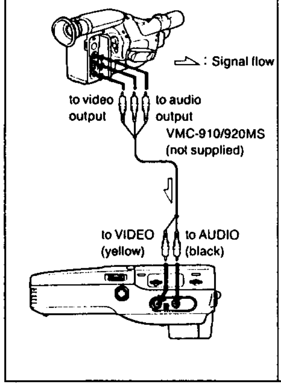
To start camera recording at the desired time
You can record a desired scene at a designated time, for example, a train passing by at a certain time. To set the timer, see page 38. The recording will start automatically at the time you set.

Using This Unit as an 8mm Video Camera Recorder Monitor

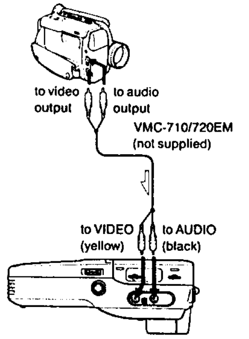
With the following connection, you can view pictures being recorded by the connected video camera recorder. Also you can view the playback pictures from the video camera recorder on this unit.

Connection

If the video camera recorder is stereo


: Signal flow
to video output
to audio output
VMC-910/920MS (not supplied)
to VIDEO (yellow)
to AUDIO (black)

If the video camera recorder is monaural


to video output
to audio output
VMC-710/720EM (not supplied)
to VIDEO (yellow)
to AUDIO (black)

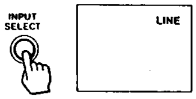
Operation

1 Turn the power on.
The POWER lamp lights up.

While pressing the green button, slide the POWER switch to the left.

VTR ON/OFF
CAMERA
POWER

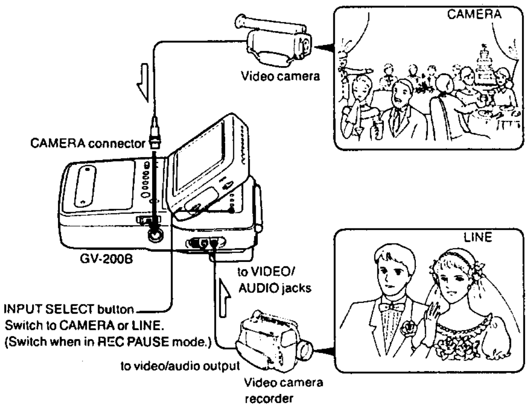
2 **Press the INPUT SELECT button to display "LINE" on the screen.**


INPUT SELECT
LINE

3 **Operate the video camera recorder.**

When connecting both a video camera recorder and a video camera

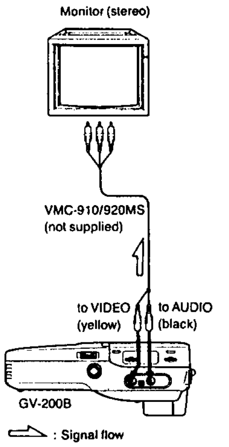
Set each unit to different angles, then, using the INPUT SELECT button, switch the picture to be recorded on this unit.

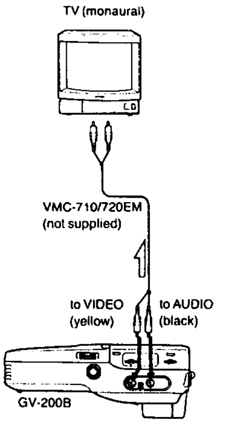

: Signal flow
CAMERA
Video camera
CAMERA connector
GV-200B
LINE
to VIDEO/ AUDIO jacks
INPUT SELECT button
Switch to CAMERA or LINE.
(Switch when in REC PAUSE mode.)
to video/audio output
Video camera recorder

To Connect Another TV or Colour Monitor

If you connect this unit to another TV or colour monitor, you can view the playback pictures or the selected TV programme on a larger screen and listen to the dynamic sound.
In this case, clear the screen of GV-200B by pressing the LCD ON/OFF button to reduce horizontal bands and noise in the picture of the TV or colour monitor during various playback modes.

To connect a TV/monitor with video and audio inputs

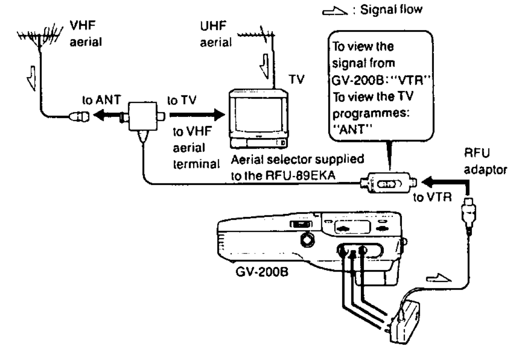

Monitor (stereo)
VMC-910/920MS (not supplied)
to VIDEO (yellow)
to AUDIO (black)
GV-200B
: Signal flow


TV (monaural)
VMC-710/720EM (not supplied)
to VIDEO (yellow)
to AUDIO (black)
GV-200B

Note
To monitor the palyback picture or the selected TV programme on another TV or colour monitor, use one based on the PAL colour systems.

To connect a TV without video and audio inputs

Use the RFU-89EKA RFU kit (not supplied).


: Signal flow
VHF aerial
UHF aerial
TV
To view the signal from GV-200B: "VTR"
To view the TV programmes: "ANT"
to ANT
to TV
to VHF aerial terminal
Aerial selector supplied to the RFU-89EKA
RFU adaptor
to VTR
GV-200B

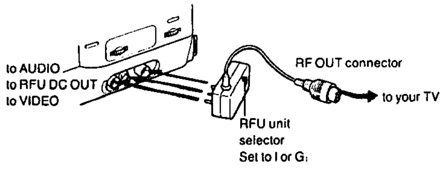
Note on the RFU-89EKA RFU kit

The RFU-89EKA includes the following accessories:
— RFU adaptor (1)
— Aerial selector (1)

Channel for VTR

To view the playback picture of this unit, set the RFU unit selector of the RFU adaptor according to your TV system (G or I), then turn on the TV and select a programme position that is not used to receive a TV station.

To connect the RFU adaptor

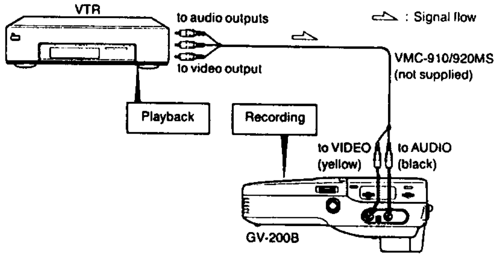

to AUDIO
to RFU DC OUT
to VIDEO
RF OUT connector
to your TV
RFU unit selector
Set to I or G.

Editing Tapes

You can edit tapes by connecting another VTR (8mm, Beta or VHS format) with video/audio inputs.

To Edit from Another VTR to This Unit

Connection


VTR
to audio outputs
to video output
: Signal flow
VMC-910/920MS
(not supplied)
Playback
Recording
to VIDEO
(yellow)
to AUDIO
(black)
GV-200B

If the VTR to be connected has a monaural audio output only, use a commercially available connecting cord such as the VMC-710/720EM.

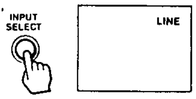
Operation

1 Turn the power on.
The POWER lamp lights.

While pressing green button, slide the POWER switch to the left.

2 Insert the cassette.

3 Press the INPUT SELECT button so that the "LINE" indication appears.


INPUT SELECT
LINE

4 Select the recording mode (SP/LP) by pressing the SP/LP button.

5 Play back the tape on another VTR and press the ❙❙ (PAUSE) button at the point you want to start playing back.

6 Set this unit in the recording pause mode.

7 Release the ❙❙ (PAUSE) buttons on both units.

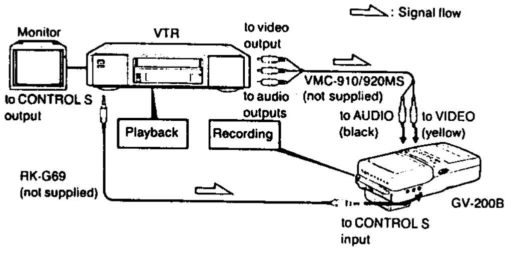
8 After editing is completed, press the ☐ (STOP) buttons on both units to stop recording.

Notes

- When the stereo recorded tape is played back on the other VTR, the mixed sound of the left and right channels are recorded on this unit.
- When the bilingual recorded tape is played back on the other VTR, select the sound to be recorded with the playback VTR.

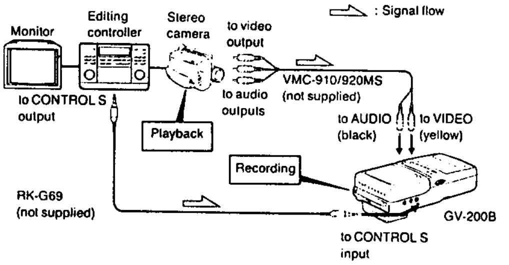
To edit from the VTR equipped with the CONTROL S output

Connect the CONTROL S input jack on this unit and the CONTROL S output jack on the other equipment.
Playback/pause on the other VTR and recording/pause on this unit can be operated simultaneously.


: Signal flow
Monitor
VTR
to video output
VMC-910/920MS
(not supplied)
to CONTROL S output
to audio outputs
to AUDIO
(black)
to VIDEO
(yellow)
Playback
Recording
RK-G69
(not supplied)
GV-200B
to CONTROL S input

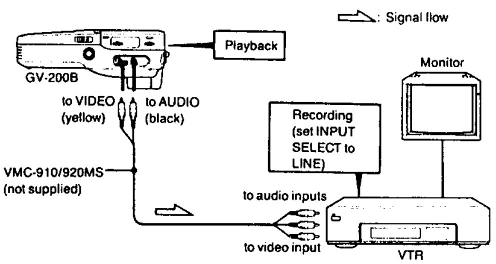
To edit with the editing controller

By connecting the editing controller, the recorder and player can be operated easily with the controller.


: Signal flow
Monitor
Editing controller
Stereo camera
to video output
VMC-910/920MS
(not supplied)
to CONTROL S output
to audio outputs
to AUDIO
(black)
to VIDEO
(yellow)
Playback
Recording
RK-G69
(not supplied)
GV-200B
to CONTROL S input

To edit with the wireless remote control kit (not supplied)
When the receiver of the wireless remote control kit is connected to the CONTROL S jack on this unit, it can be controlled remotely. This set up makes it convenient to use this unit as the tuner of a colour monitor.
When the unit is not in use, remove the receiver. If the receiver remains connected, a very small amount of electric current flows.
For details, please read the instruction manual of the wireless remote control kit.

To Edit from This Unit to Another VTR



If the VTR to be connected has a monaural audio input only, use a commercially available connecting cord such as VMC-710/720EM.

Precautions

Operation

- Operate the unit on 6.0 V (battery pack)/7.5 V (AC power adaptor)/6.5 V (DC pack DCP-77).
- For DC or AC operation, use the accessories supplied or recommended in this manual.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Avoid rough handling or mechanical shock to the unit.
- Do not apply excessive force to the LCD.
- Remove and store video cassettes after recording or playback.
- Do not wrap up the unit and operate it because heat may build up internally.
- Avoid using and storing the recorder in the following locations:
  — Locations susceptible to vibration
  — Locations exposed to strong magnetic fields
  — Locations near TV or radio transmitters where strong radio waves are generated
- Do not place the unit on the sand.

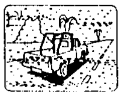
Care

- When the unit is not used for a long period of time, periodically turn on the power, operate the recorder and play back a tape for about three minutes.
- Clean the recorder body with a dry, soft cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent which may damage the finish.

Maintenance

Video Head Cleaning

To ensure a clear picture, clean the video heads periodically.
If playback pictures are noisy or hardly visible, the video heads may be contaminated. In this case, clean the video heads with the Sony V8-25CLH cleaning cassette (not supplied) according to the instructions.



Caution
Do not use commercially available wet-type cleaning cassettes. They may damage the video heads.

Note
If the V8-25CLH cleaning cassette is not available in your area, consult your Sony service facility.

If the Video Head Is Damaged

When playback pictures are not clear even after using the cleaning cassette, the video head may be damaged. In this case, the video head needs to be replaced with a new one. Consult your Sony service facility for replacing the video head.

Note on the Built-in Lighting System

A built-in lighting system is assembled inside the liquid crystal screen of this unit. The life of the small fluorescent tube used for this built-in lighting system runs out over a period of use. If the lamp becomes dimmer or goes off immediately after you turn it on, even with new batteries, replace the lamp with a new one. To replace the lamp, consult the dealer where you purchased the unit, or a Sony service facility. The expected life of the small fluorescent tube is about three years if this unit is used for an hour each day. When you use this unit in a cold environment, the fluorescent tube will be dimmer at first. As soon as the temperature of the tube rises, it will regain its original brightness.

Notes on the LCD

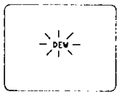
- Do not push the display forcibly.
- Do not operate the unit where the temperature is below 0°C (32°F) or above 40°C(104°F).
- If the unit is used in a cold place, a residual image may appear on the screen. This is not a malfunction of the unit.
- Constant bright points of light (red, blue, or green) may appear on the screen. This is not a malfunction of the unit.

Notes on Moisture Condensation

If this unit is brought directly from a cold place to a warm place, moisture may condense inside the unit or on the surface of the tape. If this happens, the tape may stick to the head drum, damaging both the tape and the unit. Although this unit is furnished with a moisture sensor to prevent possible damage from condensation, do not leave the tape inside the unit.

If Moisture Condenses Inside the Unit

The "DEW" indication appears on the screen.
In this case, no button will function except the EJECT button. (However, if you have been watching a TV programme, you can continue to do so.)
Eject the cassette, turn off the unit and leave the cassette holder open at least for an hour.



The unit can be used again if the DEW indication does not appear when one of the tape transport buttons is pressed.

Using Your Video TV Recorder Abroad

If you prepare fully charged battery packs and the supplied AC power adaptor (which can be used in all areas with a local power supply of 100 V-240 V), you can use your recorder in any country.

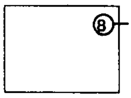
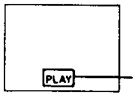
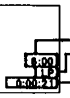
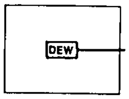
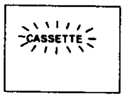
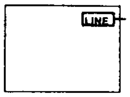
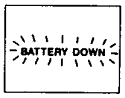
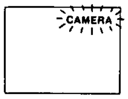
Each country has special TV colour broadcast and electricity systems. This unit is designed to record and play back using the PAL and SECAM (transferred to PAL) colour video signals. Recording and playback of video sources based on other colour systems cannot be guaranteed.

PAL system countries:
Australia, Austria, Belgium, China, Denmark, Finland, Great Britain, Holland, Hong Kong, Italy, Kuwait, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, Thailand, West Germany, etc.

SECAM system countries:
France, DDR, etc.

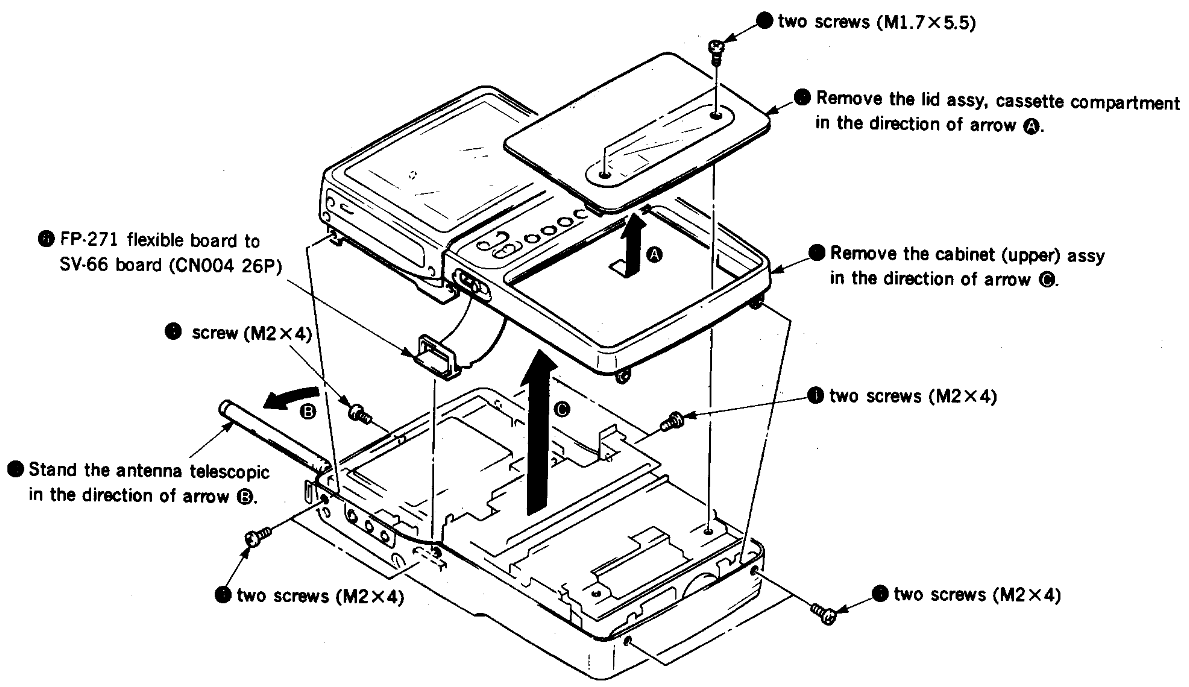
List of On-Screen Displays

The following indications appear on the screen indicating the operating condition and cautions.

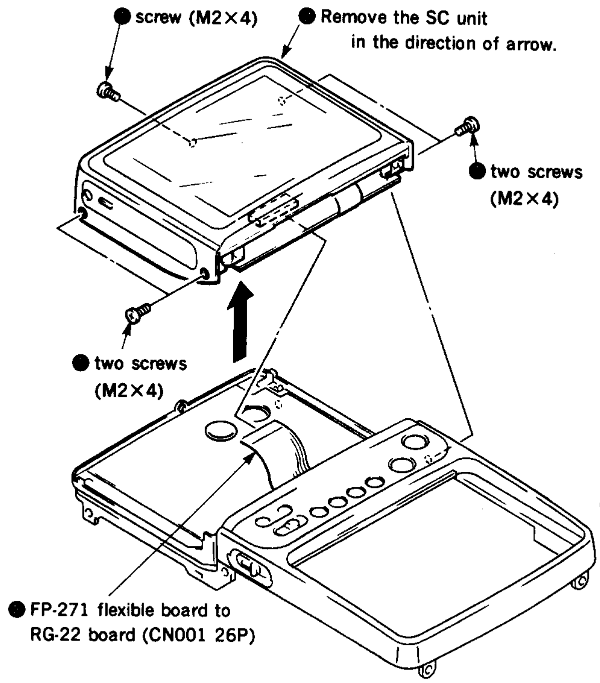
Indication	Meaning (reference page)	Indication	Meaning
	Programme number (page 27)		Tape transport operation (pages 42-44)
	Current time Recording mode (page 35) Counter (page 37)		Moisture condensation (page 63)
	Caution for the cassette (page 36)		Input from VIDEO/AUDIO jacks (page 46)
	Battery is exhausted (page 14)		Input from CAMERA connector (page 50)

SECTION 2
DISASSEMBLY

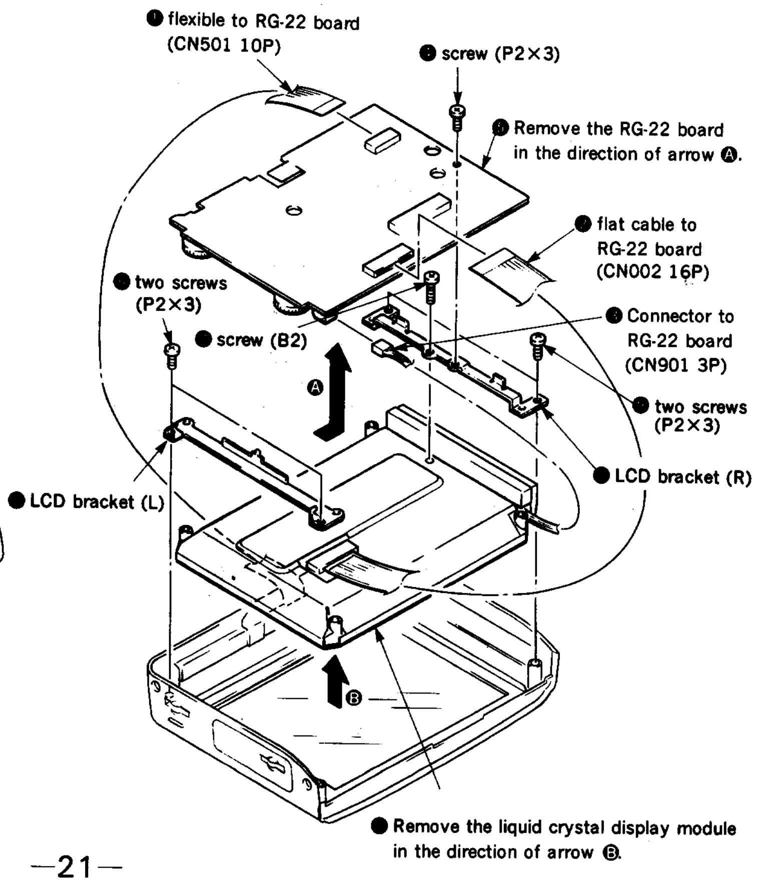
2-1. REMOVAL OF CABINET (UPPER) ASSY


● two screws (M1.7×5.5)
● Remove the lid assy, cassette compartment in the direction of arrow Ⓐ.
● FP-271 flexible board to SV-66 board (CN004 26P)
● Remove the cabinet (upper) assy in the direction of arrow Ⓒ.
● screw (M2×4)
● two screws (M2×4)
● Stand the antenna telescopic in the direction of arrow Ⓑ.
● two screws (M2×4)
● two screws (M2×4)
Ⓐ
Ⓑ
Ⓒ

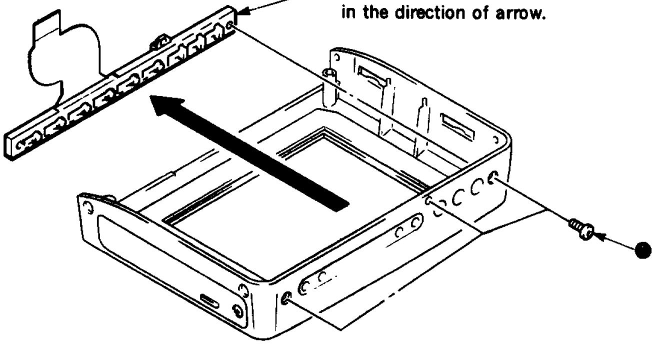
2-2. REMOVAL OF SC UNIT


● screw (M2×4)
● Remove the SC unit in the direction of arrow.
● two screws (M2×4)
● two screws (M2×4)
● FP-271 flexible board to RG-22 board (CN001 26P)

2-3. REMOVAL OF LIQUID CRYSTAL DISPLAY MODULE


● flexible to RG-22 board (CN501 10P)
● screw (P2×3)
● Remove the RG-22 board in the direction of arrow Ⓐ.
● flat cable to RG-22 board (CN002 16P)
● two screws (P2×3)
● screw (B2)
● Connector to RG-22 board (CN901 3P)
● two screws (P2×3)
● LCD bracket (R)
● LCD bracket (L)
Ⓐ
Ⓑ
● Remove the liquid crystal display module in the direction of arrow Ⓑ.

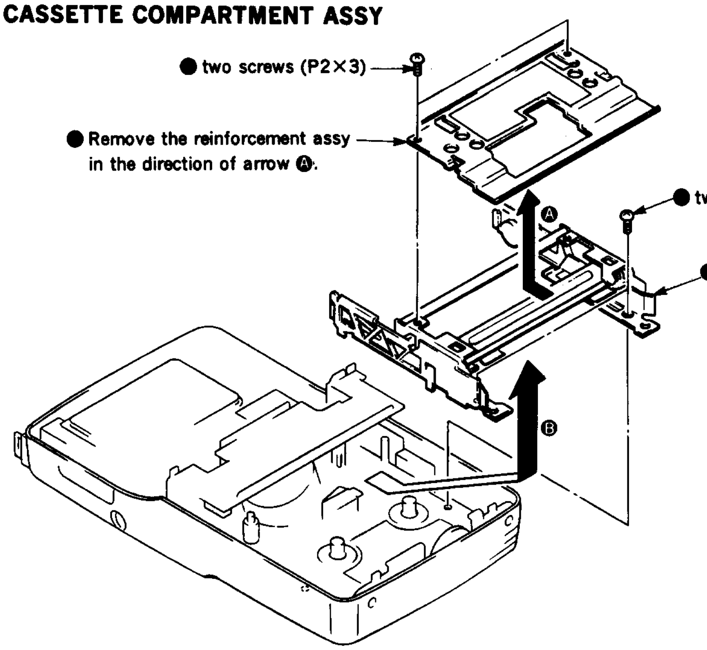
2-4. REMOVAL OF CONTROL SWITCH BLOCK



● Remove the switch block, control in the direction of arrow.

● three screws (M2×4)

2-5. REMOVAL OF CASSETTE COMPARTMENT ASSY



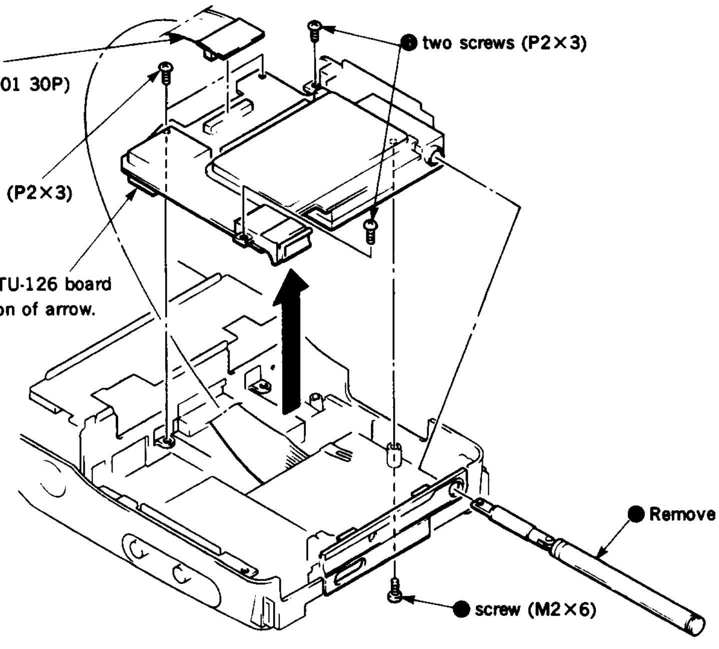
● two screws (P2×3)

● Remove the reinforcement assy in the direction of arrow Ⓐ.

● two screws (P2×3)

● Remove the cassette compartment assy in the direction of arrow Ⓑ.

2-6. REMOVAL OF TU-126 BOARD



● flexible board to TU-126 board (CN001 30P)

● two screws (P2×3)

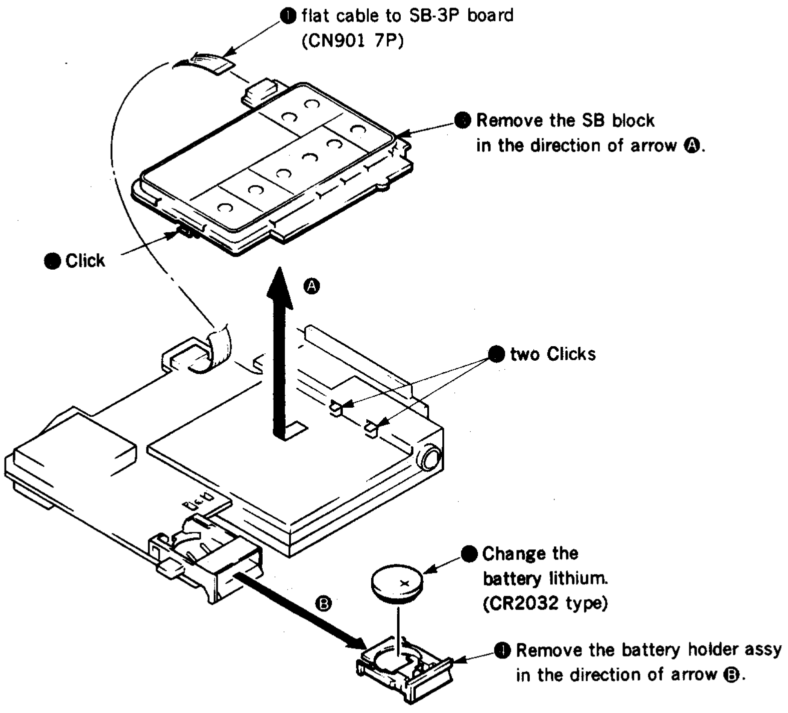
● two screws (P2×3)

● Remove the TU-126 board in the direction of arrow.

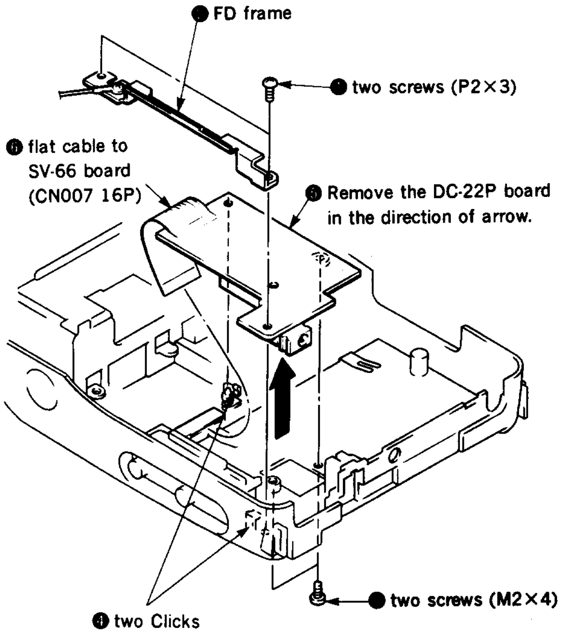
● Remove the antenna telescopic

● screw (M2×6)

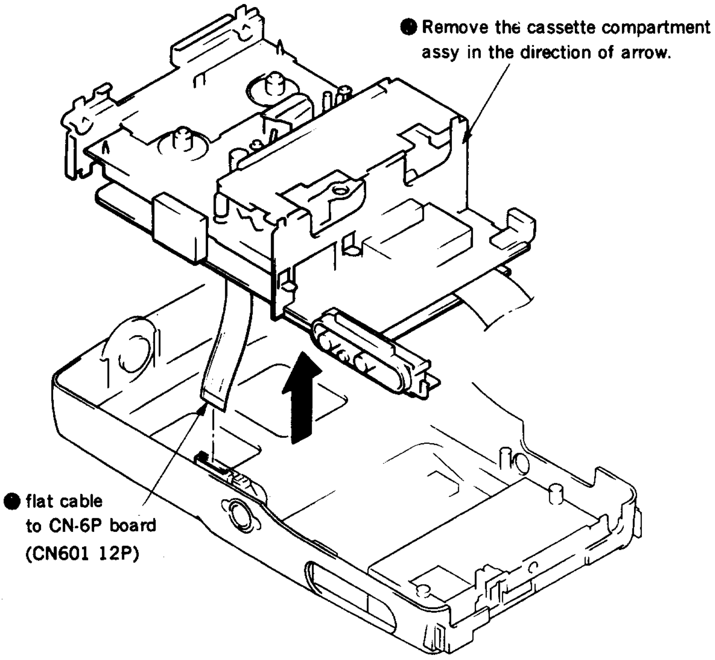
2-7. REMOVAL OF SB BLOCK AND LITHIUM BATTERY


❶ flat cable to SB-3P board (CN901 7P)
● Remove the SB block in the direction of arrow Ⓐ.
● Click
Ⓐ
● two Clicks
● Change the battery lithium. (CR2032 type)
Ⓑ
● Remove the battery holder assy in the direction of arrow Ⓑ.

2-8. REMOVAL OF DC-22P BOARD


● FD frame
● two screws (P2×3)
❻ flat cable to SV-66 board (CN007 16P)
❺ Remove the DC-22P board in the direction of arrow.
❹ two Clicks
● two screws (M2×4)

2-9. REMOVAL OF MECHANISM DECK


● Remove the cassette compartment assy in the direction of arrow.
● flat cable to CN-6P board (CN601 12P)

2-10. INTERNAL VIEWS

— UPPER —

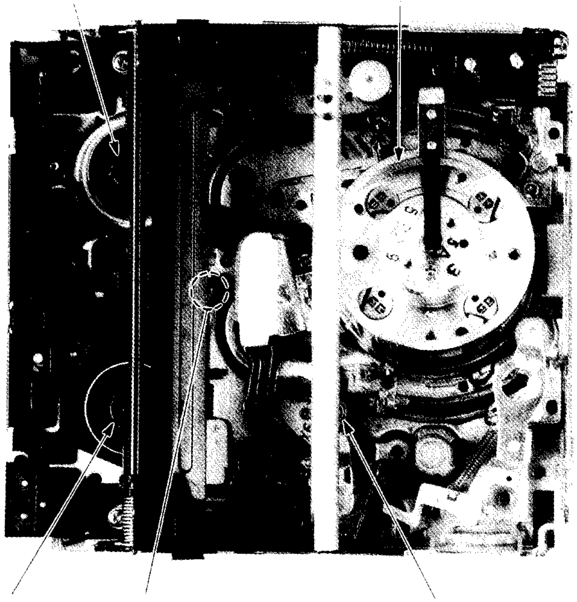
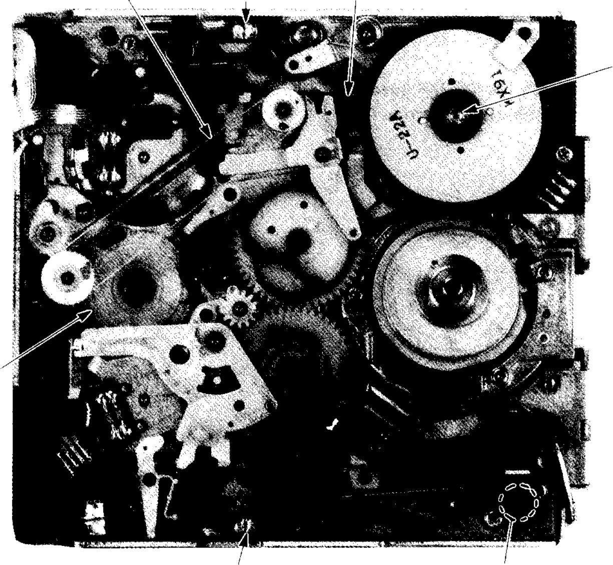


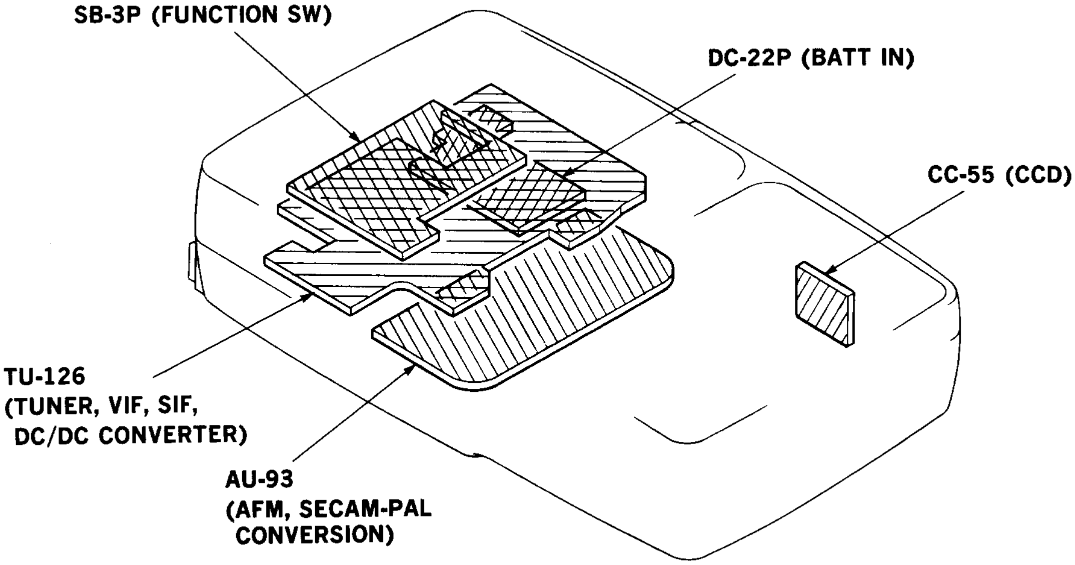
Table assy, reel, supply
X-3728-851-1
(DGU-64A-R) Drum Assy A-7048-405-A
(DGR-64-R) Drum Upper A-7049-343-A
Table assy, reel, take-up
X-3728-855-1
Tape top/Tape end LED
(GL-452S)
8-719-940-81
ARM block assy, pinch
A-7040-219-A

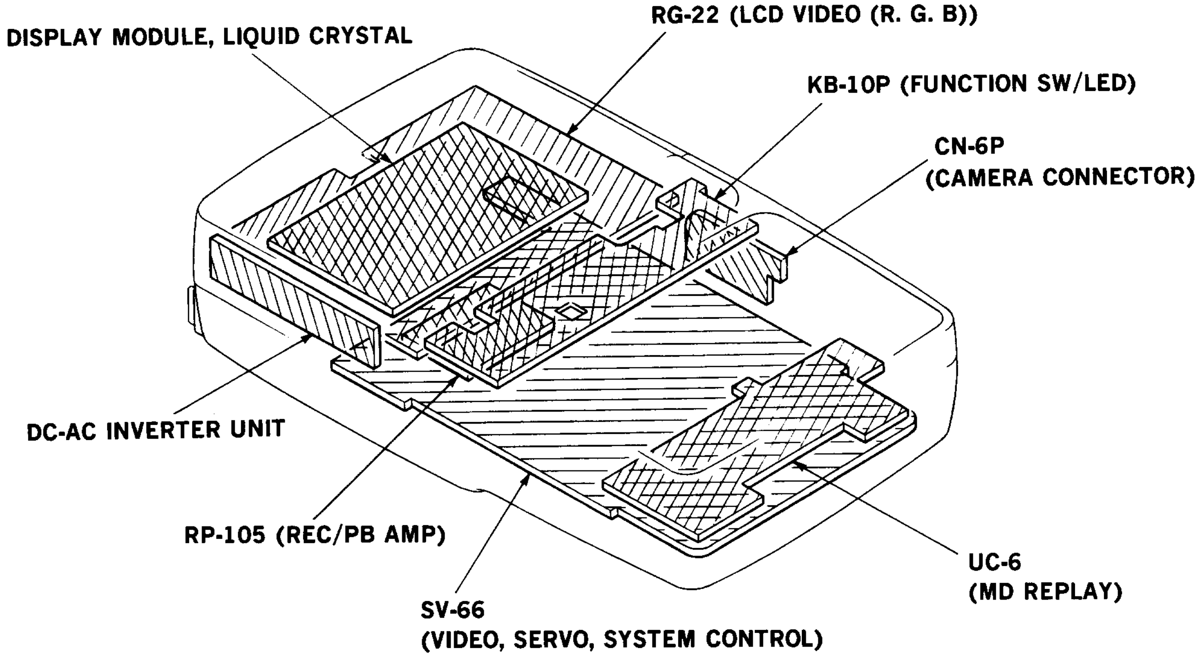
— LOWER —


Tape top sensor
8-729-906-48
Belt (L), timing
3-741-197-01
Belt (S), timing
3-728-866-11
Capstan motor (M902)
8-835-331-01
Gear assy, RK
X-3728-866-1
Tape top sensor (EE-TP109)
8-729-906-48
Loading motor assy (M903)
A-7040-208-A

SECTION 3
DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION


SB-3P (FUNCTION SW)
DC-22P (BATT IN)
CC-55 (CCD)
TU-126
(TUNER, VIF, SIF,
DC/DC CONVERTER)
AU-93
(AFM, SECAM-PAL
CONVERSION)


DISPLAY MODULE, LIQUID CRYSTAL
RG-22 (LCD VIDEO (R. G. B))
KB-10P (FUNCTION SW/LED)
CN-6P
(CAMERA CONNECTOR)
DC-AC INVERTER UNIT
RP-105 (REC/PB AMP)
SV-66
(VIDEO, SERVO, SYSTEM CONTROL)
UC-6
(MD REPLAY)

3-7. TABLE OF SV-66 BOARD IC206 (CXP-80116) PORT

Terminal No.	Signal Name.	I/O	Definition	POWOFF
1	SEL2	O	ATF REF SELECT	L
2	SEL1	O	ATF REF SELECT	L
3	TALLY	O	TALLY output for external camera	L
4	DET P	O	ST/BI determination pulse	L
5	DRM ACCEL	O	Drum FH acceleration pulse	L
6	DRM BREAK	O	Drum FH deceleration pulse	L
7	TUNER ON	O	TUNER 5V power ON/OFF signal	L
8	JOG	O	H signal at varying speed playback	L
9	W HOLD	O	Signal for LCD VIDEO HOLD	L
10	DRUM ON	O	DRUM DRIVER control signal	L
11	INT VD	O	INTERNAL VD output	L
12	VIDEO ON	O	VIDEO power ON/OFF signal	L
13	VIDEO CS	O	Chip select for VIDEO communication	L
14	LINE MUTE	O	Audio MUTE signal	L
15	SP/LP	O	SPEED MODE signal	L
16	VAPB MODE	O	VIDEO, AUDIO REC/PB selecting signal	L
17		O		L
18	ME/MP	O	ME/MP TAPE determination signal	L
19	T/E LED	O	TAPE TOP/END detection signal	L
20	UN LD	O	LOADING MOTOR control signal	L
21	LD	O	LOADING MOTOR control signal	L
22	M OUT4	O	KEY MATRIX output	L
23	M OUT3	O	KEY MATRIX output	L
24	M OUT2	O	KEY MATRIX output	L
25	M OUT1	O	KEY MATRIX output	L
26	M OUT0	O	KEY MATRIX output	L
27	POW ON	O	SW 5V system power source control signal	Hiz
28	CAMERA ON	O	Power source control signal for CAMERA	Hiz
29	(POWER)BATT LED	O	POWER LED control signal	Hiz
30	REC LED	O	REC LED control signal	Hiz
31	MP			—
32	CC RESET	I	COSMO RESETterminal	—
33	V_{ss}		GND	
34	XTAL		Terminal for 16MHz Xtal	
35	EXTAL		Terminal for 16MHz Xtal	
36	SYNCON CS	I/O	Chip select for SYSCON	—
37	SYSCON SI	I	Serial data input	—
38	SYSCON SO	I	Serial data output	—
39	SYSCON SCK	I/O	Serial clock	—
40	M IN3	I	MATRIX input	—

Terminal No.	Signal Name.	I/O	Definition	POWOFF
41	M IN2	I	MATRIX input	—
42	M IN1	I	MATRIX input	—
43	M IN0	I	MATRIX input	—
44	TAPE TOP	I	TAPE TOP A/D	—
45	TAPE END	I	TAPE END A/D	—
46	T REEL FG	I	T REEL FG A/D	—
47	S REEL FG	I	S REEL FG A/D	—
48		I		—
49		I		—
50	BATT DOWN	I	BATT DOWN A/D	—
51	ATF ERROR	I	ATF ERROR A/D	—
52	AD GND			
53	AV REF		Standard voltage for A/D	
54	AV_{DD}		Power source for A/D	
55	DRUM PG	I	DRUM PG input	—
56				
57	CLOG	I	CLOG detection input	—
58	COMP SYNC	I	COMP SYNC input	—
59	PB SP/$\overline{\text{LP}}$	I	FF/REW CUE/REV SP/LP determination input	—
60	DRUM PG	I	DRUM PG input	—
61	DRUM FG	I	DRUM FG input	—
62	CAP FG	I	CAP FG input	—
63	INPUT SEL1	O	Input selecting signal for audio	H
64	INPUT SEL2	O	Input selecting signal for audio	H
65	CAP ER	O	CAPSTAN ERROR output	Hiz
66	DRM ER	O	DRUM 3STATE ERROR output	Hiz
67	CAP PWM	O	CAPSTAN PWM ERROR output	L
68	DRUM RVS	O	DRUM direction selecting signal	L
69	CAP FG	O	CAPSTAN FG input for HMS	—
70	START/STOP	O	External camera START/STOP input	—
71	~NMI			
72	V_{DD}		Power source for COSMO	
73	V_{SS}		GND	
74	Vpp			
75	CAP ON	O	CAPSTAN DRIVER ON OFF signal	L
76	CAP FWD	O	CAPSTAN direction selecting signal	L
77	RP PB MODE	O	REC/PB selecting signal	L
78	$\overline{\text{FE ON}}$	O	Flying erase oscillation ON/OFF signal	L
79	JOG VD	O	VD signal inserting to VIDEO at varying speed playback	L
80	RF CONT	O	RF CONT output	L

3-8. TEST MODE

Use CN802 on the KB-10P board.

CN802 pin position

1	TEST B
2	GND
3	TEST A
4	TEST C
5	TEST D

When each terminal of the TEST A, B, C and D is shortened and opened, twelve types of TEST MODE are selected.

When servicing, attaching the "test mode set jig" (J-6082-110-A) to CN802 allows to select twelve types of test mode with the hexadecimal selecting switches of the jig.

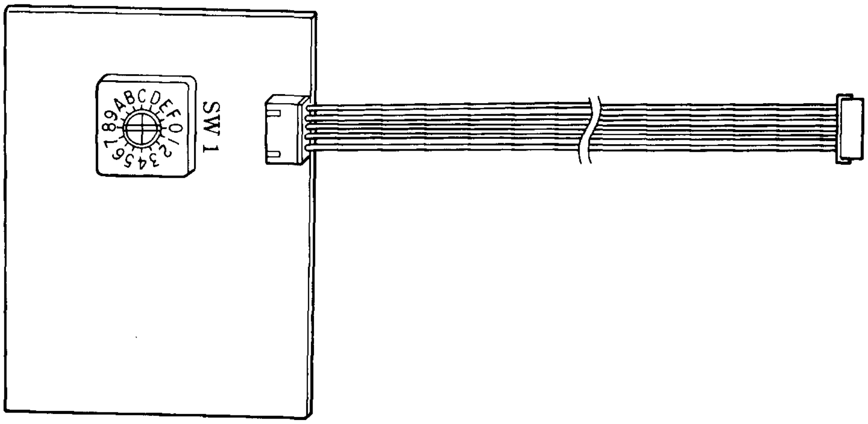


Fig3-1. Test mode set jig

TEST MODE table		Switch position of the test mode set jig.
DCBA	SELECT MODE	
0 0 0 0	Normal mode	0
0 0 0 1	Emergency off	1
0 0 1 0	TT TEST	2
0 0 1 1	Track shift	3
0 1 0 0	SW POSI L	4
0 1 0 1	SW POSI H	5
0 1 1 0	BATT DOWN PRE	6
0 1 1 1	BATT DOWN END	7
1 0 0 0	VIDEO DATA, MP, SP	8
1 0 0 1	VIDEO DATA, MP, LP	9
1 0 1 0	VIDEO DATA, ME, SP	A
1 0 1 1	VIDEO DATA, ME, LP	B

The test code is designated by four figures.

MSB LSB

"D", TEST "C", TEST "B", TEST "A"

At short : 1, At open : 0

VIDEO DATA SELECT MODE is set at the TEST, "D" MAKE.

① Normal mode

Normal set condition

② Emergency off (Release of emergency stop)

③ TT TEST

MODE for extending the SIRCS code (For producing line)

④ Track shift

Run on the ATF track shift condition at the playback mode.

Timer microcomputer is in the clock adjustment mode.

⑤ SW POSI

Adjustment mode of switch position.

SWPOSI is stored in EEPROM as 16bit DATA. This data is adjusted dividing high 8bit and low 8bit. Use CH+/− KEY.

TEST MODE0101 : Varies at 16μsec per 1STEP.

TEST MODE0100 : Varies at 1μsec per 1STEP. When low 8 bit is incremented from FF. HEX, high 8 bit goes UP. And when it is decremented from 00.HEX, high 8 bit goes DOWN.

When the EEPROM has been replaced, it takes considerable time to adjust it. Therefore. the data must be preset before entering adjustment.

Preset function of the SW POSI is added. The preset function sets to high 8 bit to 07. HEX, when the DATA SCREEN KEY of SC part is pressed in the SW POSI adjustment mode. The low 8 bit is not varied.

<When the SV-66 Board IC206 is CXP80116-805Q>

If SW POSI adjustment has been done (for example, for mechanism deck replacement), IC206 should be replaced by CXP80116-821Q (8-752-818-67).

⑥ BATTTERY DOWN ADJUSTMENT

Adjusted with TEST MODE 0111. When this mode is set, the following display is shown on LCD.

$$\left.\begin{array}{ll} \text{PRE} & -1.76 \\ \text{DOWN} & -1.74 \end{array}\right\} \text{ex}$$

Supplying voltage for adjusting is performed with applying 5.50V+0.02V to the battery terminal in the TUNER REC SP MODE. When pressing the CH+ KEY on the KB-10P board, the color of display on the LCD turns to blue for few seconds from white, and then returns to white. The voltage of the battery PRE, DOWN is stored in EEPROM as the 8bit DATA by this operation.

⑦ VIDEO DATA ADJUSTMENT MODE

Short the TEST D (Solder the split land at the lower part of the KB-10P board Q803)
The following display is shown on the LCD.

VIDEO DATA

CFL1 1 (RESET)
CFL2 1 (DISPLAY)
NCL1 1 (SLEEP)
NCL2 1 (NEXT)
NCLP1 1 (UP)
NCLP2 1 (CLOCK)

KB-10P BOARD (Component Side)

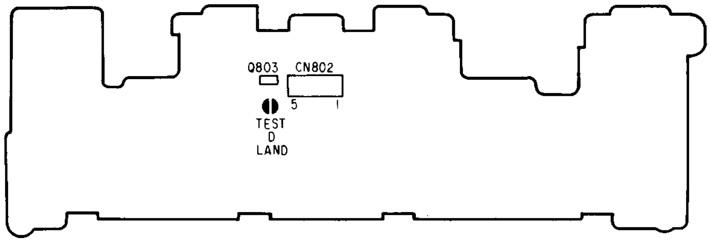


Fig3-2.

Six types of DATA are varied with the KEY on the SC part.
RESET → COUNTER RESET KEY
DISPLAY → DATA SCREEN KEY
SLEEP → SLEEP KEY
NEXT → NEXT KEY
UP → + KEY
CLOCK → CLOCK SET KEY

Pressing each KEY allows to rewrite DATA. ("0" is rewritten to "L", "1" is rewritten to "H".)
Four modes are adjusted by the types of TAPE (ME, MP) and TAPE SPEED (SP, LP).when the CH+KEY is pressed, the color of the display on the LCD turns to blue for few seconds from white and returns to white. The function to store the screen DATA in EEPROM is added by this operation. (See to the Table 3-1. for the data writing to EEPROM.)

Table 3-1. EE P ROM Write Data

TEST MODE						CFL1	CFL2	NCL1	NCL2	NCLP1	NCLP2
D	C	B	A	Switch position of the test mode set jig							
1	0	0	0	8	SP•MP	H	L	H	L	L	L
1	0	0	1	9	LP•MP	L	H	L	H	H	L
1	0	1	0	A	SP•ME	H	L	H	L	L	L
1	0	1	1	B	LP•ME	L	H	L	H	H	L

Note) When EEPROM is replaced, the following adjustment or write should be performed.

1. SW POSI adjustment
2. BATTERY DOWN adjustment
3. VIDEO DATA write
4. Channel preset

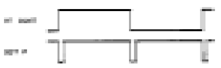
3-9. LIST OF SIRCS CODE (CATEGORY : VTR2)

CODE No.	CODE	COMMAND
01	00	CH-1/1
02	01	CH-2/2
03	02	CH-3/3
04	03	CH-4/4
05	04	CH-5/5
06	05	CH-6/6
07	06	CH-7/7
08	07	CH-8/8
09	08	CH-9/9
10	09	CH-10/0
11	0 A	CH-11/*
12	0 B	CH-12/CH/ENTER/#
13	0 C	CH-13/1−
14	0 D	CH-14/2−
17	10	CH-HIGH(+)
18	11	CH-LOW(−)
22	15	POWER ON/OFF
23	16	EJECT
24	17	MPX MAIN/SUB
25	18	STOP
26	19	PAUSE
27	1 A	PB
28	1 B	REWIND
29	1 C	FF
30	1 D	REC
33	20	STILL
36	23	1/5 SLOW
47	2 E	POWER ON
48	2 F	POWER OFF
50	31	FORWARD
55	36	SLEEP
71	46	COUNTER RESET
72	47	MEM CNTR ON/OFF
80	4F	INPUT SELECT
89	58	SPEED CHANGE
91	5A	COUNTER DISPLAY ON/OFF
97	60	TIMER SET
98	61	NEXT
102	65	TIMER REC

3-10. SYSTEM CONTROL — VIDEO - AUDIO PART INTERFACE

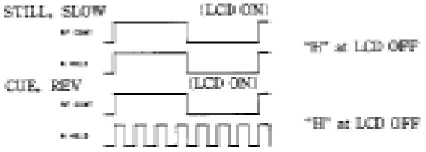
			VTR MODE												CAMERA MODE	
Signal mode	I/O	Terminal No.	STUP	FF	REW	PB SEARCH		PB	PICTURE SEARCH		PB PAUSE	SLOW	REC	REC PAUSE	STAND BY	REC
						CUE	REVIEW		CUE	REVIEW						
DET P	O	IC206 ②	H	H	H	H	H	* 1	H	H	H	H	* 2	H	H	H
JOG	O	IC206 ⑥	L	L	L	H	H	L	H	H	H	H	L	L	L	L
W HOLD	O	IC206 ⑤	H	H	H	* 3	* 3	H	* 3	* 3	* 4	* 4	H	H	H	H
VIDEO ON	O	IC206 [illegible]	L	L	L	H	H	H	H	H	H	H	H	H	H	H
VIDEO CS	O	IC206 [illegible]	* 5	* 5	* 5	* 5	* 5	* 5	* 5	* 5	* 5	* 5	* 5	* 5	* 5	* 5
LINE MUTE	O	IC206 [illegible]	L	L	L	H	H	L	H	H	H	H	L	L	L	L
SP/LP	O	IC206 [illegible]	H/L	H/L	H/L	* 6	* 6	* 6	* 6	* 6	* 6	* 6	H/L	H/L	H/L	H/L
VA PB MODE	O	IC206 [illegible]	L	L	L	H	H	H	H	H	H	H	L	L	L	L
ME/MP	O	IC206 [illegible]	* 8	* 8	* 8	* 8	* 8	* 8	* 8	* 8	* 8	* 8	* 8	* 8	* 8	* 8
SYSCON SO	O	IC206 [illegible]	* 9	* 9	* 9	* 9	* 9	* 9	* 9	* 9	* 9	* 9	* 9	* 9	* 9	* 9
SYSCON SCK	I/O	IC206 [illegible]	* 10	* 10	* 10	* 10	* 10	* 10	* 10	* 10	* 10	* 10	* 10	* 10	* 10	* 10
CLOG	I	IC206 [illegible]	H	* 12	* 12	* 12	* 12	* 12	* 12	* 12	* 12	* 12	H	H	H	H
COMP SYNC	I	IC206 [illegible]	* 13	* 13	* 13	* 13	* 13	* 13	* 13	* 13	* 13	* 13	* 13	* 13	* 13	* 13
PB SP/$\overline{LP}$	I	IC206 [illegible]	L	* 14	* 14	* 14	* 14	L	* 14	* 14	L	L	L	L	L	L
INPUT SEL1	O	IC206 [illegible]	* 15	* 15	* 15	* 15	* 15	* 15	* 15	* 15	* 15	* 15	* 15	* 15	* 15	* 15
INPUT SEL2	O	IC206 [illegible]	* 16	* 16	* 16	* 16	* 16	* 16	* 16	* 16	* 16	* 16	* 16	* 16	* 16	* 16
RP PB MODE	O	IC206 [illegible]	H	H	H	H	H	H	H	H	H	H	L	H	H	L
$\overline{\text{FE ON}}$	O	IC206 [illegible]	H	H	H	H	H	H	H	H	H	H	L	H	H	L
JOG V_0	O	IC206 [illegible]	L	L	L	* 7	* 7	L	* 7	* 7	* 7	* 7	L	L	L	L
RF CONT	O	IC206 [illegible]	L	* 11	* 11	* 11	* 11	* 11	* 11	* 11	* 11	* 11	* 11	* 11	* 11	* 11

* 1, 2 DET P



PB : "L" pulse every 1V
REC : "H" at STEREO and MONO
REC : "L" pulse every 1V at BILIGUAL

* 3, 4 W HOLD



* 5 : "L" pulse of 1V period.
* 6 : By the recording mode of the playback tape.
* 7 : "H" pulse of 1V period.
* 8 : "L" at using MP TAPE.
* 9 : "L" pulse of 1V period.
* 10: "L" pulse of 1V period.
* 11: Duty pulse of 50% of 2V period.
* 12: "H" when the video head is loaded, and "L" at normal.
* 13: Positive polarity composite synchronizing signal.
* 14: "H" at the SP recorded tape, "L" at the LP recorded tape.
* 15, * 16: Output according to the input mode.

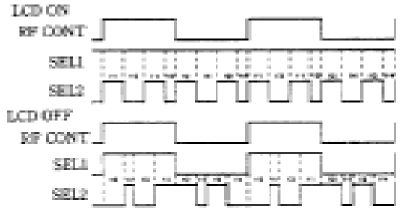
INPUT MODE	INPUT SEL1	INPUT SEL2
TUNER	L	L
LINE	H	H
CAMERA	H	L
PB	L	L
POWER OFF	H	H

3-11. SYSTEM CONTROL — SERVO PERIPHERAL CIRCUIT INTERFACE

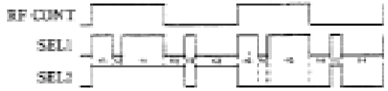
			VTR MODE													CAMERA MODE	
Signal Name	I/O	Terminal No.	STOP	FF	REW	FR SEARCH		PB	PICTURE SEARCH		PB PAUSE	SLOW	REC	REC PAUSE	STAND BY	REC
						CUE	REVIEW		CUE	REVIEW						
SEL2	O	IC206①	L	H	H	*1	*1	*2	*1	*1	H/L	*3	*4	L	L	*4
SEL1	O	IC206②	L	H	H	*5	*5	*6	*5	*5	H	*7	*8	H	H	*8
DRUM ON	O	IC206[illegible]	L	H	H	H	H	H	H	H	H	H	H	H	H	H
INT VD	O	IC206[illegible]	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9
ATF ER	I	IC206[illegible]	*11	*11	*11	*11	*11	*11	*11	*11	*11	*11	*11	*11	*11	*11
DRUM PG	I	IC206[illegible]	L	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12
DRUM FG	I	IC206[illegible]	L	*13	*13	*13	*13	*13	*13	*13	*13	*13	*13	*13	*13	*13
CAP FG	I	IC206[illegible]	L	*14	*14	*14	*14	*14	*14	*14	*14	*14	*14	*14	*14	*14
CAP ER	O	IC206[illegible]	L	*15	*15	*15	*15	*15	*15	*15	L	*15	*15	L	L	*15
DRUM ER	O	IC206[illegible]	L	*16	*16	*16	*16	*16	*16	*16	*16	*16	*16	*16	*16	*16
CAP PWM	O	IC206[illegible]	L	*17	*17	*17	*17	*17	*17	*17	*17	*17	*17	L	L	*17
DRUM RVS	O	IC206[illegible]	L	L	L	L	L	L	L	L	L	L	L	L	L	L
CAP ON	O	IC206[illegible]	L	H	H	H	H	H	H	H	L	*19	H	L	L	H
CAPFWD	O	IC206[illegible]	L	H	L	H	L	H	H	L	L	*20	H	L	L	H
DRM ACCEL	O	IC206⑤	H	H	H	H	H	H	H	H	H	*21	H	H	H	H
DRM BRAK	O	IC206⑥	L	L	L	L	L	L	L	L	L	*22	L	L	L	L
RF CONT	O	IC206[illegible]	L	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10

(* 18)

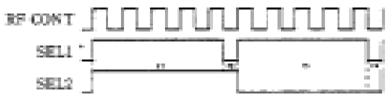
* 1, 5



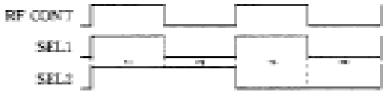
* 2, 6



* 3, 7(1/5 SLOW)



* 4, 8



* 9: "H" pulse of 1V
* 10: Pulse of 50% 2V period Duty.
* 11: ATF error voltage
* 12: "H" pulse of 2V
* 13: Pulse of 1.4msec
* 14: Pulse with frequency in proportion to the tape speed
* 15: Pulse output of CAPSTAN rise/fall time
* 16: PWM output of 6msec at "H", "L", "Hiz" (2.5VDC)
* 17: Pulse width is varied in proportion to the PWM signal tape speed of 64msec.
* 18: Instant "H" at loading the full top tape.
* 19: "H" for the intermittent feeding tape at SLOW.
* 20: BRAKE pulse of the intermittent feeding tape at SLOW.
* 21: Acceleration of the acceleration pulse "L" for fH correction of the DRUM at SLOW.
* 22: Deceleration of the deceleration pulse "H" for fH correction of the DRUM at SLOW.

3-12. SYSTEM CONTROL — SYSTEM CONTROL PERIPHERAL CIRCUIT INTERFACE

Signal name	I/O	Terminal No.	Input-output level
$\overline{\text{TALLY}}$	O	IC206 ③	"H" at normal, "L" at the CAMERA mode with REC
TUNER ON	O	IC206 ⑦	"H" at TUNER of the INPUT mode, "L" at the other.
VIDEO ON	O	IC206⑫	"H" when the operation of VTR part of the REC • PB mode is required, "L" at the other.
SP/$\overline{\text{LP}}$	O	IC206⑮	"H" at playing back of the tape recoded in SP mode and at the SP recorded mode.
ME/$\overline{\text{MP}}$	O	IC206⑱	"L" at using the MP tape, "H" at using the ME tape.
T/E LED	O	IC206⑲	Pulse period of which pulse train is PB • REC, 100msec.. FF • REW. 4msec., CUE • REV, 8msec.
UNLD	O	IC206⑳	"L" at normal, "H" at UNTHREADING. "H" pulse at the mechanical mode transition.
LD	O	IC206㉑	"L" at normal, "H" at THREADING. "H" pulse at the mechanical mode transition.
$\overline{\text{M OUT4}}$	O	IC206㉒	"L" pulse of 19msec period.
$\overline{\text{M OUT3}}$	O	IC206㉓	"L" pulse of 19msec period.
M OUT2	O	IC206㉔	"H" pulse of 19msec period.
M OUT1	O	IC206㉕	"H" pulse of 19msec period.
$\overline{\text{M OUT0}}$	O	IC206㉖	"L" pulse of 2msec period.
$\overline{\text{POW ON}}$	O	IC206㉗	"L" at turning ON the power.
$\overline{\text{CAMERA ON}}$	O	IC206㉘	"L" in the camera mode.
$\overline{\text{(POWER)BATT LED}}$	O	IC206㉙	"L" at lightening POWER LED, L pulse train at warning BATTERY DOWN.
$\overline{\text{REC LED}}$	O	IC206㉚	"L" at REC
$\overline{\text{CC RESET}}$	I	IC206㉜	"H" at normal, "L" at reset
SYSCON CS	I	IC206㊱	"L" pulse train of 1V period
SYSCON SI	I	IC206㊲	"L" pulse train of 1V period
SYSCON SO	O	IC206㊳	"L" pulse train of 1V period
SYSCON SCK	I/O	IC206㊴	"L" pulse train of 1V period
MIN3	I	IC206㊵	Key matrix input "H" at normal, "L" pulse at input
MIN2	I	IC206㊶	Key matrix input "H" at normal, "L" pulse at input
MIN1	I	IC206㊷	Key matrix input "H" at normal, "L" pulse at input
MIN0	I	IC206㊸	Key matrix input "H" at normal, "L" pulse at input
TAPE TOP		IC206㊹	TAPE TOP determination input Pulse train of 0.5 or more at TOP, "L" at the other.
TAPE END		IC206㊺	TAPE END determination input Pulse train of 0.5 or more at TOP.
T REEL FG		IC206㊻	Pulse of 2.0Vp-p or more generated by rotation of the T REEL
S REEL FG		IC206㊼	Pulse of 2.0Vp-p or more generated by rotation of the S REEL
BATT DOWN		IC206㊿	Input by dividing the main battery. Adjust Battery Down based on this.
START/STOP		IC206(70)	"L" at pressing the camera START/STOP button, "H" at normal

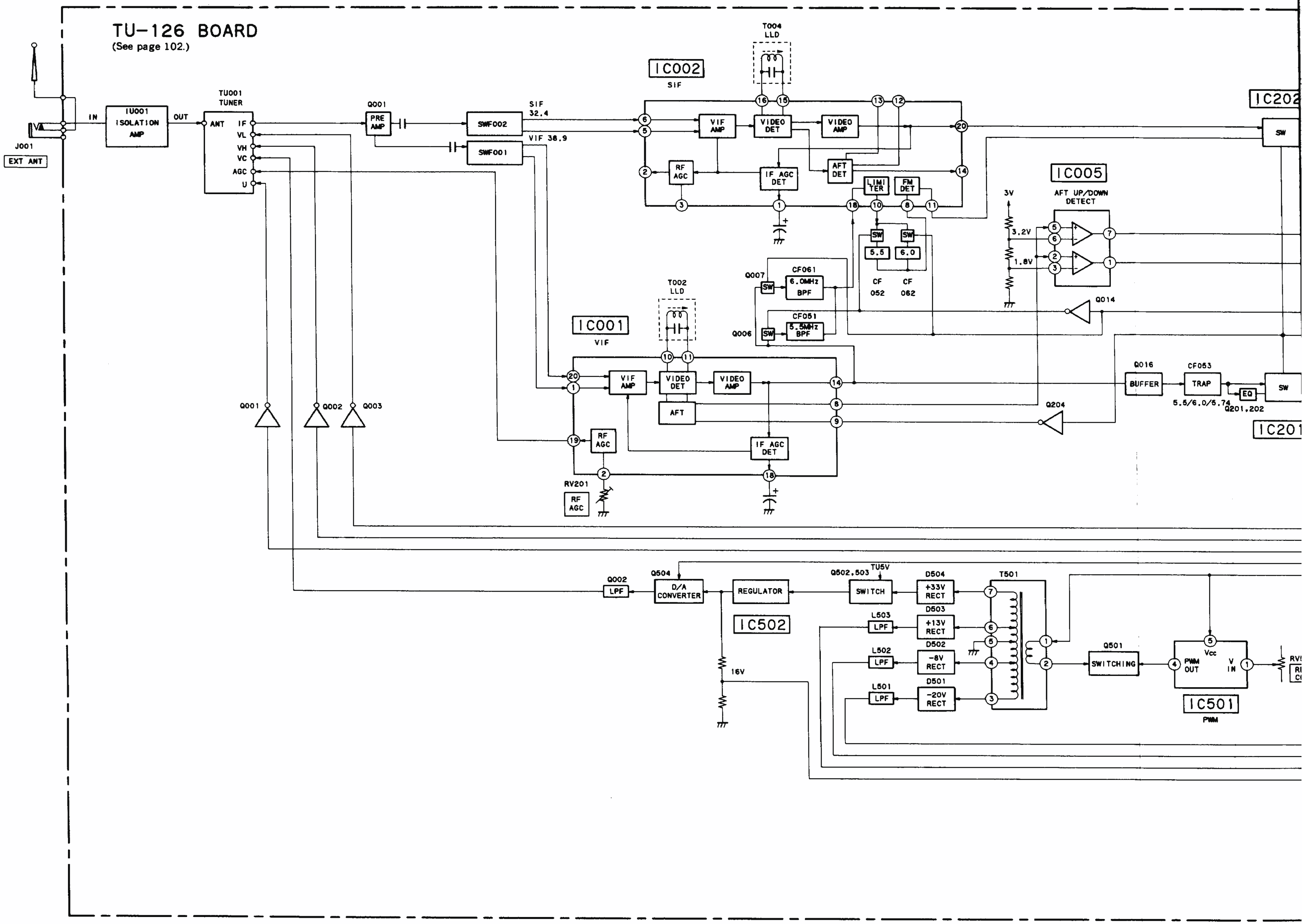
Matrix table

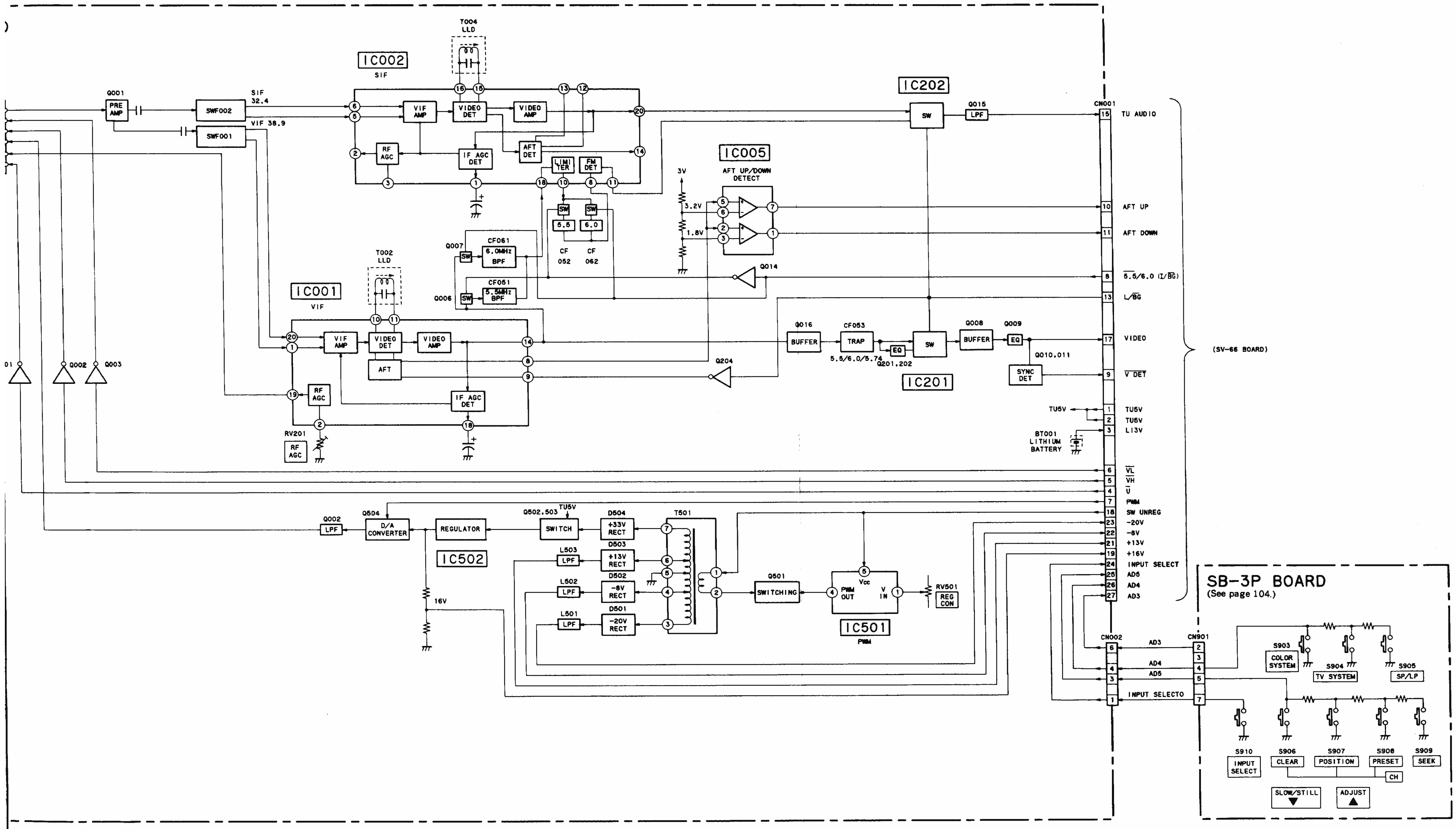
	M IN3	M IN2	M IN1	M IN0
$\overline{\text{M OUT4}}$	REW	FF	PB	LINE STEREO
$\overline{\text{M OUT3}}$	STOP	PAUSE	REC	SW
M OUT2	TUNER/ LINE/ CAMERA	SERVICE	TEST A	TEST B
M OUT1	TEST C	TEST D	ME/MP	REC PROOF
$\overline{\text{M OUT0}}$	CC LOCK	M SW2	M SW1	M SW0

3-13. SYSTEM CONTROL — MECHANISM CONTROL PART INTERFACE

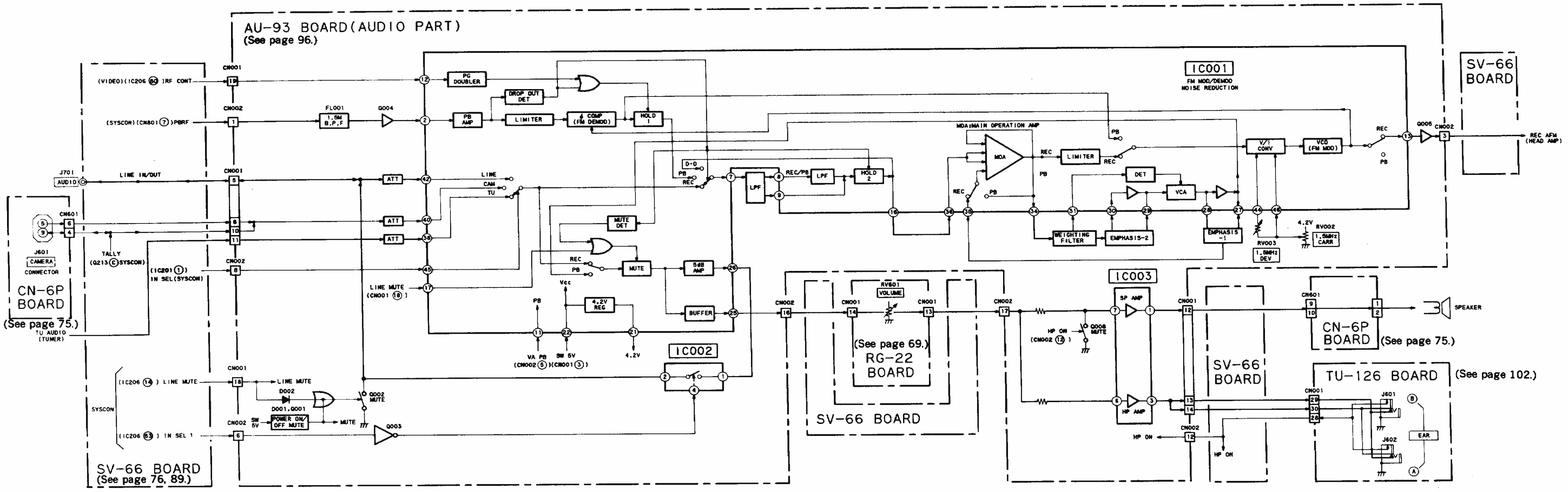
<table>
<tr><th>Signal Name</th><th>I/O</th><th>Terminal No.</th><th>Input-output Level</th></tr>
<tr><td>ME/$\overline{\text{MP}}$</td><td>I</td><td>CN001 ②</td><td>"L" pulse at using the MP tape, "H" pulse at the other (19msec period)</td></tr>
<tr><td>REC PROOF</td><td>I</td><td>CN001 ③</td><td>"L" pulse when the recording cassette is inserted, "H" pulse at the other (19msec period)</td></tr>
<tr><td>TOP/END LED</td><td>O</td><td>CN001 ④</td><td>"L" pulse of 1Vp-p, the pulse period is 100msec to 4msec</td></tr>
<tr><td>TOP SENS</td><td>I</td><td>CN001 ⑤</td><td>"L" at normal, "L" pulse at TAPE TOP and without a cassette</td></tr>
<tr><td>T REEL FG</td><td>I</td><td>CN001 ⑥</td><td>Pulse generated by the T reel rotation (2.0Vp-p or more)</td></tr>
<tr><td>S REEL FG</td><td>I</td><td>CN001 ⑨</td><td>Pulse generated by the S reel rotation (2.0Vp-p or more)</td></tr>
<tr><td>MODE SW2</td><td>I</td><td>CN001 ⑩</td><td rowspan="4">
<table>
<tr><th></th><th>EJECTED</th><th>THREADING UNTHREADING</th><th>STOP</th><th>REC/PB/FF/ REW/CEU/REV PAUSE/SLOW</th></tr>
<tr><td>M SW2 (10P-13P)</td><td>○</td><td>○</td><td>×</td><td>○</td></tr>
<tr><td>M SW1 (11P-13P)</td><td>×</td><td>○</td><td>○</td><td>×</td></tr>
<tr><td>M SW0 (12P-13P)</td><td>×</td><td>×</td><td>○</td><td>○</td></tr>
</table>
○ : Short × : Open
</td></tr>
<tr><td>MODE SW1</td><td>I</td><td>CN001⑪</td></tr>
<tr><td>MODE SW0</td><td>I</td><td>CN001⑫</td></tr>
<tr><td>MOUT0 (COM)</td><td>O</td><td>CN001⑬</td></tr>
<tr><td>CC DOWN</td><td>I</td><td>CN001⑭</td><td>Between 13P and 14P is shortened when the cassette control goes down. Between 13P and 14P is opened when the cassette control does not go down.</td></tr>
<tr><td>END SENS</td><td>I</td><td>CN001⑮</td><td>"L" pulse at normal, "H" pulse at the tape end and at having no tape.</td></tr>
</table>

3-14. TUNER BLOCK DIAGRAM

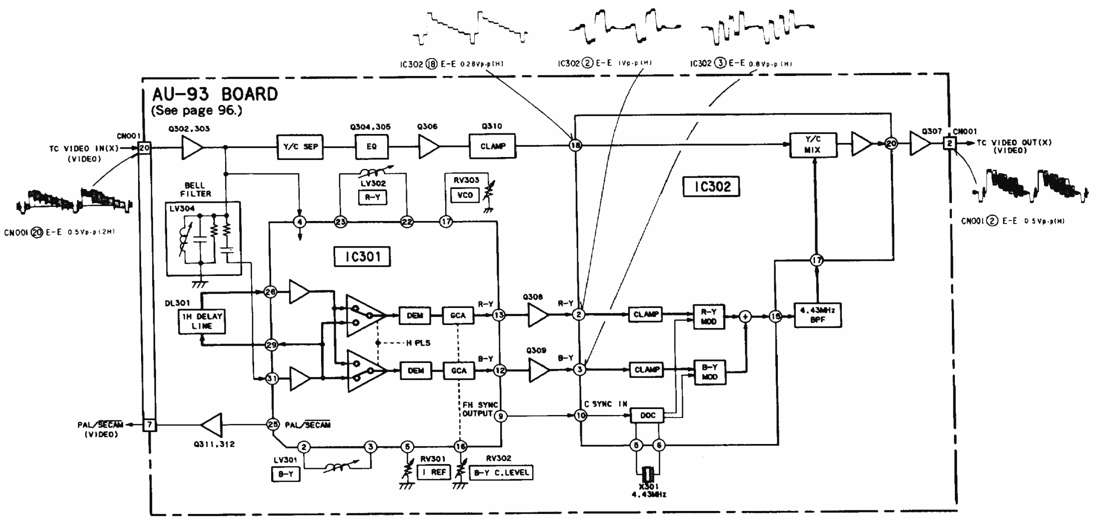

TU-126 BOARD
(See page 102.)
J001
EXT ANT
IN
IU001
ISOLATION AMP
OUT
TU001
TUNER
ANT
IF
VL
VH
VC
AGC
U
Q001
PRE AMP
SWF002
SWF001
SIF 32.4
VIF 38.9
IC002
SIF
T004
LLD
VIF AMP
VIDEO DET
VIDEO AMP
RF AGC
IF AGC DET
AFT DET
LIMITER
FM DET
SW
5.5
6.0
CF 052
CF 062
Q007
CF061
6.0MHz BPF
Q006
CF051
5.5MHz BPF
IC005
AFT UP/DOWN DETECT
3V
3.2V
1.8V
Q014
IC202
SW
T002
LLD
IC001
VIF
VIF AMP
VIDEO DET
VIDEO AMP
AFT
RF AGC
IF AGC DET
RV201
RF AGC
Q016
BUFFER
CF053
TRAP
5.5/6.0/5.74
EQ
Q201,202
SW
Q204
IC201
Q001
Q002
Q003
Q002
LPF
Q504
D/A CONVERTER
REGULATOR
IC502
16V
Q502,503
TU5V
SWITCH
D504
+33V RECT
L503
LPF
D503
+13V RECT
L502
LPF
D502
-8V RECT
L501
LPF
D501
-20V RECT
T501
Q501
SWITCHING
Vcc
PWM OUT
V IN
IC501
PWM
RV


IC002
SIF
T004
LLD
Q001
PRE AMP
SWF002
SWF001
SIF 32.4
VIF 38.9
VIF AMP
VIDEO DET
VIDEO AMP
RF AGC
IF AGC DET
AFT DET
LIMITER
FM DET
5.5
6.0
CF 052
CF 062
Q007
CF061
6.0MHz BPF
Q006
CF051
5.5MHz BPF
T002
LLD
IC001
VIF
AFT
RV201
RF AGC
IC202
SW
Q015
LPF
CN001
TU AUDIO
3V
IC005
AFT UP/DOWN DETECT
3.2V
1.8V
AFT UP
AFT DOWN
Q014
5.5/6.0 (I/BG)
L/BG
Q016
BUFFER
CF053
TRAP
5.5/6.0/5.74
EQ
Q201,202
IC201
Q008
BUFFER
Q009
EQ
Q010,011
SYNC DET
VIDEO
V DET
Q204
TU5V
TU5V
TU5V
LI3V
BT001
LITHIUM BATTERY
(SV-66 BOARD)
Q002
Q003
VL
VH
U
PWM
SW UNREG
-20V
-8V
+13V
+16V
INPUT SELECT
AD5
AD4
AD3
Q002
LPF
Q504
D/A CONVERTER
REGULATOR
IC502
16V
Q502,503
TU5V
SWITCH
D504
+33V RECT
D503
+13V RECT
D502
-8V RECT
D501
-20V RECT
L503
LPF
L502
LPF
L501
LPF
T501
Q501
SWITCHING
PWM OUT
Vcc
V IN
IC501
PWM
RV501
REG CON
SB-3P BOARD
(See page 104.)
CN002
CN901
AD3
AD4
AD5
INPUT SELECTO
S903
COLOR SYSTEM
S904
TV SYSTEM
S905
SP/LP
S910
INPUT SELECT
S906
CLEAR
S907
POSITION
S908
PRESET
S909
SEEK
CH
SLOW/STILL ▼
ADJUST ▲

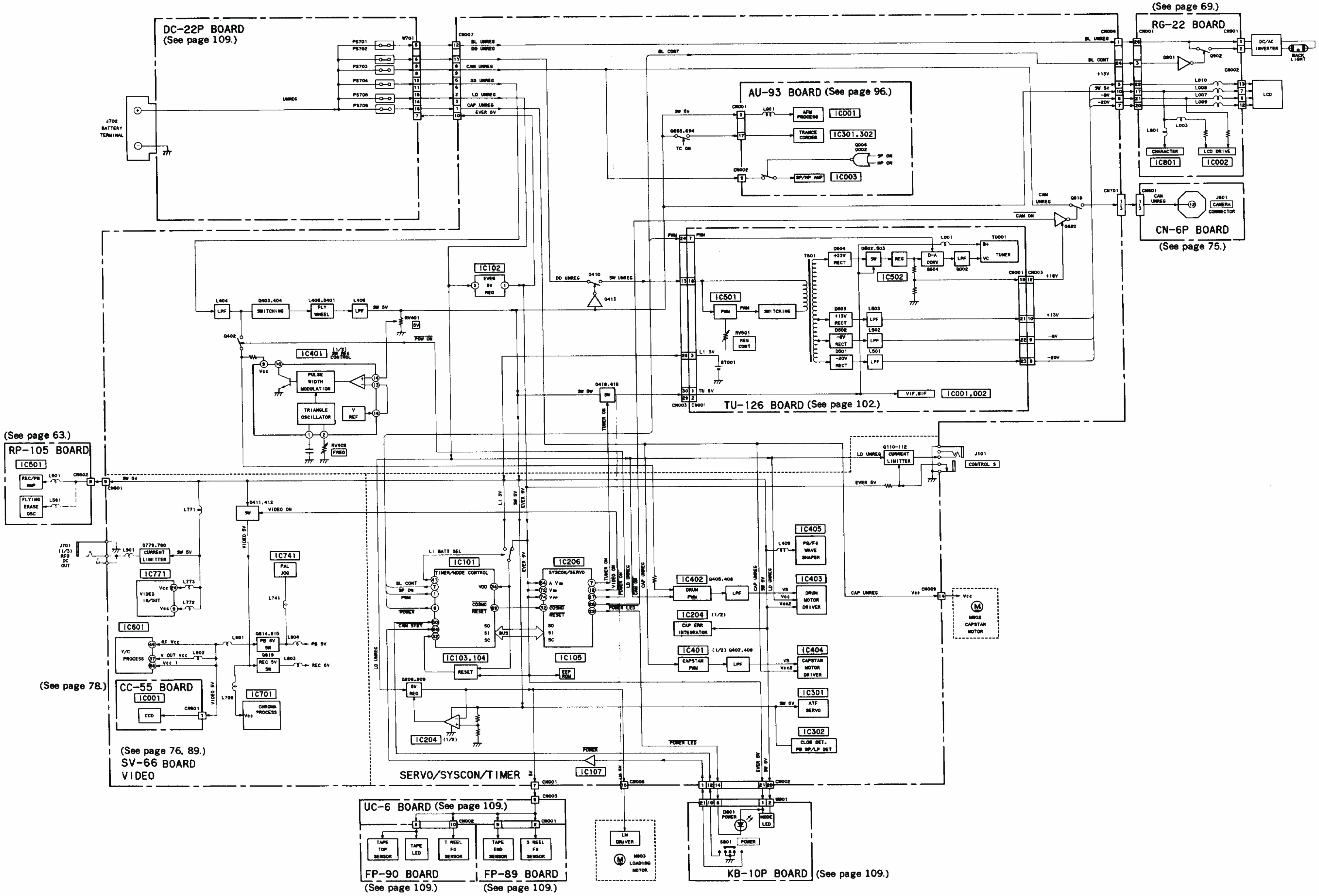
3-15. AUDIO BLOCK DIAGRAM


AU-93 BOARD(AUDIO PART)
(See page 96.)
CN001
(VIDEO)(IC206 ⑳)RF CONT
CN002
(SYSCON)(CN801 ⑦)PBRF
J701
AUDIO
LINE IN/OUT
CN601
J601
CAMERA
CONNECTOR
CN-6P
BOARD
(See page 75.)
TALLY
(Q213 Ⓒ SYSCON)
(IC201 ①)
IN SEL(SYSCON)
TU AUDIO
(TUNER)
SYSCON
(IC206 ⑭) LINE MUTE
(IC206 63) IN SEL 1
LINE MUTE
D002
D001,Q001
SW 5V
POWER ON/OFF MUTE
MUTE
Q002
MUTE
Q003
SV-66 BOARD
(See page 76, 89.)
FL001
1.5M B.P.F
Q004
PG DOUBLER
DROP OUT DET
PB AMP
LIMITER
COMP (FM DEMOD)
HOLD 1
ATT
LINE
CAM
TU
LINE MUTE
(CN001 ⑱)
MUTE DET
REC
PB
MUTE
5dB AMP
BUFFER
Vcc
4.2V REG
VA PB
SW 5V
(CN002 ⑤)(CN001 ③)
4.2V
IC002
D-D
REC/PB
LPF
HOLD 2
IC001
FM MOD/DEMOD
NOISE REDUCTION
MDA:MAIN OPERATION AMP
MDA
LIMITER
DET
VCA
WEIGHTING FILTER
EMPHASIS-2
EMPHASIS -1
V/I CONV
VCO (FM MOD)
RV003
1.5MHz DEV
RV002
1.5MHz CARR
Q005
REC AFM
(HEAD AMP)
SV-66
BOARD
RV601
VOLUME
(See page 69.)
RG-22
BOARD
SV-66 BOARD
IC003
SP AMP
HP AMP
HP ON
(CN002 ⑫)
Q008
MUTE
HP ON
SPEAKER
CN-6P
BOARD
(See page 75.)
TU-126 BOARD
(See page 102.)
J601
J602
EAR
Ⓐ
Ⓑ

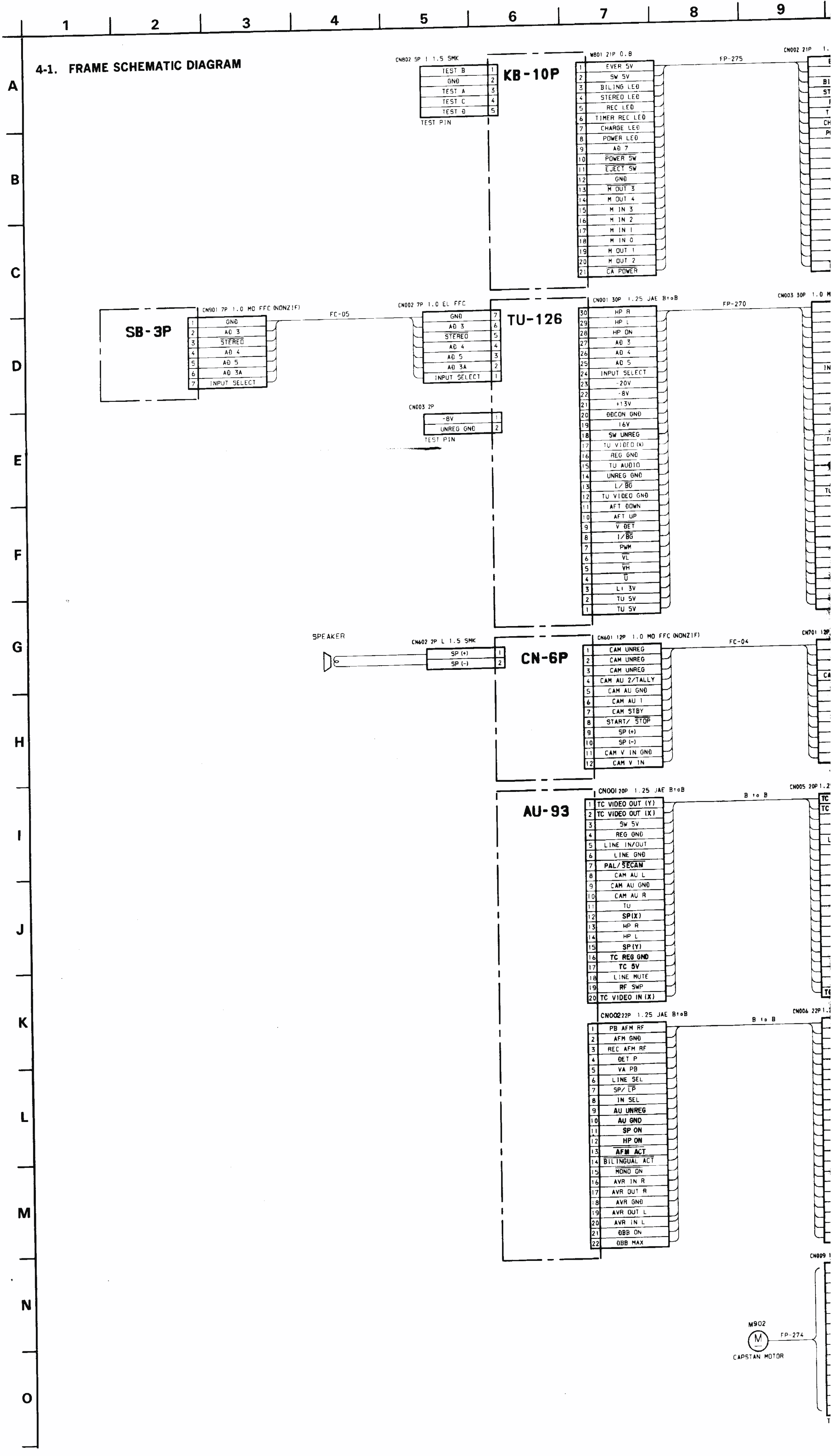
3-16. SECAM-PAL CONVERSION BLOCK DIAGRAM


IC302 ⑱ E-E 0.28Vp-p(H)
IC302 ② E-E 1Vp-p(H)
IC302 ③ E-E 0.8Vp-p(H)
AU-93 BOARD
(See page 96.)
CN001
TC VIDEO IN(X)
(VIDEO)
CN001 ⑳ E-E 0.5Vp-p(2H)
Q302,303
Y/C SEP
Q304,305
EQ
Q306
Q310
CLAMP
BELL FILTER
LV304
LV302
R-Y
RV303
VCO
IC301
IC302
DL301
1H DELAY LINE
DEM
GCA
H PLS
R-Y
B-Y
Q308
Q309
FH SYNC OUTPUT
C SYNC IN
DOC
R-Y MOD
B-Y MOD
4.43MHz BPF
Y/C MIX
Q307
TC VIDEO OUT(X)
(VIDEO)
CN001 ② E-E 0.5Vp-p(H)
PAL/SECAM
(VIDEO)
Q311,312
PAL/SECAM
LV301
B-Y
RV301
I REF
RV302
B-Y C.LEVEL
X301
4.43MHz

3-17. POWER BLOCK DIAGRAM


DC-22P BOARD
(See page 109.)
J702 BATTERY TERMINAL
UNREG
PS701
PS702
PS703
PS704
PS705
PS706
W701
CN007
BL UNREG
DD UNREG
CAM UNREG
SS UNREG
LD UNREG
CAP UNREG
EVER 5V
BL CONT
(See page 69.)
RG-22 BOARD
DC/AC INVERTER
BACK LIGHT
LCD
CHARACTER
IC801
LCD DRIVE
IC002
AU-93 BOARD (See page 96.)
IC001
IC301,302
IC003
AFM PROCESS
TRANCE CORDER
SP/HP AMP
SP ON
HP ON
TC ON
CN-6P BOARD
(See page 75.)
J601 CAMERA CONNECTOR
CAM UNREG
CAM ON
TU-126 BOARD (See page 102.)
IC501
IC502
TU001
TUNER
PWM
SWITCHING
REG CONT
+33V RECT
+13V RECT
-8V RECT
-20V RECT
VIF,SIF
IC001,002
+13V
-8V
-20V
+16V
L1 3V
TU 5V
SW 5V
DD UNREG
SW UNREG
IC102
EVER 5V REG
L404
LPF
Q403,404
SWITCHING
FLY WHEEL
POW ON
IC401
PULSE WIDTH MODULATION
TRIANGLE OSCILLATOR
V REF
RV402 FREQ
(See page 63.)
RP-105 BOARD
IC501
REC/PB AMP
FLYING ERASE OSC
J701 RFU DC OUT
CURRENT LIMITTER
IC771
VIDEO IN/OUT
IC601
Y/C PROCESS
PB 5V
REC 5V
IC741
PAL JOG
IC701
CHROMA PROCESS
(See page 78.)
CC-55 BOARD
IC001
CCD
(See page 76, 89.)
SV-66 BOARD
VIDEO
SERVO/SYSCON/TIMER
IC101
TIMER/MODE CONTROL
IC103,104
RESET
IC206
SYSCON/SERVO
IC105
EEP ROM
IC204
IC107
POWER
POWER LED
IC402
DRUM PWM
IC204
CAP ERR INTEGRATOR
IC401
CAPSTAN PWM
IC405
PB/FG WAVE SHAPER
IC403
DRUM MOTOR DRIVER
IC404
CAPSTAN MOTOR DRIVER
IC301
ATF SERVO
IC302
CLOG DET. PB SP/LP DET
J101 CONTROL S
LD UNREG
CURRENT LIMITTER
CAP UNREG
M902 CAPSTAN MOTOR
UC-6 BOARD (See page 109.)
TAPE TOP SENSOR
TAPE LED
T REEL FG SENSOR
TAPE END SENSOR
S REEL FG SENSOR
FP-90 BOARD
(See page 109.)
FP-89 BOARD
(See page 109.)
LM DRIVER
M903 LOADING MOTOR
KB-10P BOARD (See page 109.)
D801 POWER
MODE LED
S801 POWER

4-1. FRAME SCHEMATIC DIAGRAM


1
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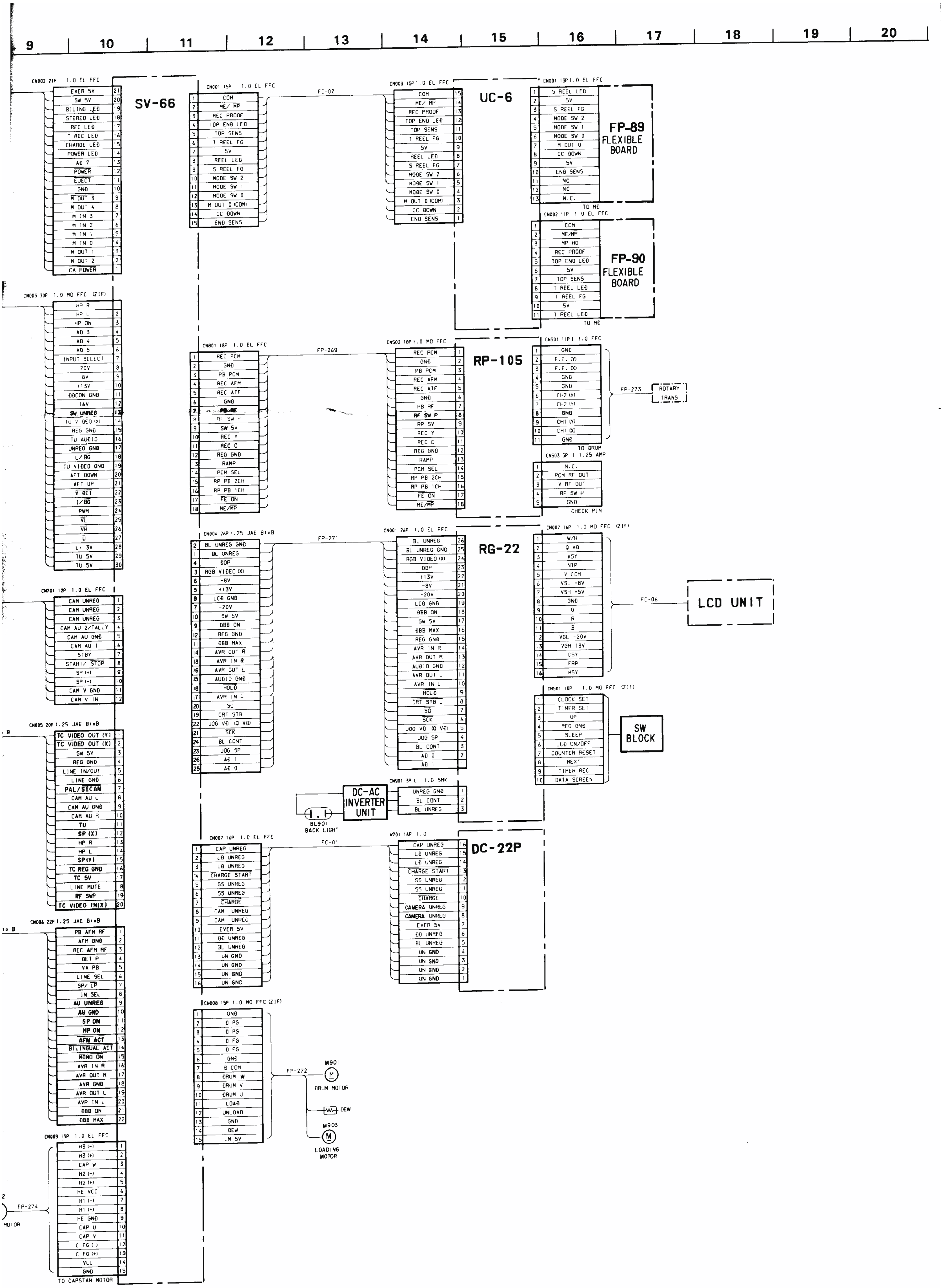
6
7
8
9
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
KB-10P
CN802 5P I 1.5 SMK
1 TEST B
2 GND
3 TEST A
4 TEST C
5 TEST D
TEST PIN
W801 21P 0.8
1 EVER 5V
2 SW 5V
3 BILING LED
4 STEREO LED
5 REC LED
6 TIMER REC LED
7 CHARGE LED
8 POWER LED
9 AD 7
10 POWER SW
11 EJECT SW
12 GND
13 M OUT 3
14 M OUT 4
15 M IN 3
16 M IN 2
17 M IN 1
18 M IN 0
19 M OUT 1
20 M OUT 2
21 CA POWER
FP-275
CN002 21P
SB-3P
CN901 7P 1.0 MO FFC (NONZIF)
1 GND
2 AD 3
3 STEREO
4 AD 4
5 AD 5
6 AD 3A
7 INPUT SELECT
FC-05
TU-126
CN002 7P 1.0 EL FFC
7 GND
6 AD 3
5 STEREO
4 AD 4
3 AD 5
2 AD 3A
1 INPUT SELECT
CN003 2P
1 -8V
2 UNREG GND
TEST PIN
CN001 30P 1.25 JAE BtoB
30 HP R
29 HP L
28 HP ON
27 AD 3
26 AD 4
25 AD 5
24 INPUT SELECT
23 -20V
22 -8V
21 +13V
20 DDCON GND
19 16V
18 SW UNREG
17 TU VIDEO (X)
16 REG GND
15 TU AUDIO
14 UNREG GND
13 L/BG
12 TU VIDEO GND
11 AFT DOWN
10 AFT UP
9 V DET
8 I/BG
7 PWM
6 VL
5 VH
4 U
3 LI 3V
2 TU 5V
1 TU 5V
FP-270
CN003 30P 1.0 M
SPEAKER
CN602 2P L 1.5 SMK
1 SP (+)
2 SP (-)
CN-6P
CN601 12P 1.0 MO FFC (NONZIF)
1 CAM UNREG
2 CAM UNREG
3 CAM UNREG
4 CAM AU 2/TALLY
5 CAM AU GND
6 CAM AU 1
7 CAM STBY
8 START/ STOP
9 SP (+)
10 SP (-)
11 CAM V IN GND
12 CAM V IN
FC-04
CN701 12P
AU-93
CN001 20P 1.25 JAE BtoB
1 TC VIDEO OUT (Y)
2 TC VIDEO OUT (X)
3 SW 5V
4 REG GND
5 LINE IN/OUT
6 LINE GND
7 PAL/SECAM
8 CAM AU L
9 CAM AU GND
10 CAM AU R
11 TU
12 SP(X)
13 HP R
14 HP L
15 SP(Y)
16 TC REG GND
17 TC 5V
18 LINE MUTE
19 RF SWP
20 TC VIDEO IN (X)
B to B
CN005 20P
CN002 22P 1.25 JAE BtoB
1 PB AFM RF
2 AFM GND
3 REC AFM RF
4 DET P
5 VA PB
6 LINE SEL
7 SP/ LP
8 IN SEL
9 AU UNREG
10 AU GND
11 SP ON
12 HP ON
13 AFM ACT
14 BILINGUAL ACT
15 MONO ON
16 AVR IN R
17 AVR OUT R
18 AVR GND
19 AVR OUT L
20 AVR IN L
21 DBB ON
22 DBB MAX
B to B
CN006 22P
CN009
M902
M
FP-274
CAPSTAN MOTOR



9
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14
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17
18
19
20
SV-66
CN002 21P 1.0 EL FFC
EVER 5V 21
SW 5V 20
BILING LED 19
STEREO LED 18
REC LED 17
T REC LED 16
CHARGE LED 15
POWER LED 14
AD 7 13
POWER 12
EJECT 11
GND 10
M OUT 3 9
M OUT 4 8
M IN 3 7
M IN 2 6
M IN 1 5
M IN 0 4
M OUT 1 3
M OUT 2 2
CA POWER 1
CN003 30P 1.0 MO FFC (ZIF)
HP R 1
HP L 2
HP ON 3
AD 3 4
AD 4 5
AD 5 6
INPUT SELECT 7
20V 8
-8V 9
+13V 10
DDCON GND 11
16V 12
SW UNREG 13
TU VIDEO (X) 14
REG GND 15
TU AUDIO 16
UNREG GND 17
L/BG 18
TU VIDEO GND 19
AFT DOWN 20
AFT UP 21
V DET 22
I/BG 23
PWM 24
VL 25
VH 26
U 27
L+ 3V 28
TU 5V 29
TU 5V 30
CN701 12P 1.0 EL FFC
CAM UNREG 1
CAM UNREG 2
CAM UNREG 3
CAM AU 2/TALLY 4
CAM AU GND 5
CAM AU 1 6
STBY 7
START/STOP 8
SP (+) 9
SP (-) 10
CAM V GND 11
CAM V IN 12
CN005 20P 1.25 JAE B to B
TC VIDEO OUT (Y) 1
TC VIDEO OUT (X) 2
SW 5V 3
REG GND 4
LINE IN/OUT 5
LINE GND 6
PAL/SECAM 7
CAM AU L 8
CAM AU GND 9
CAM AU R 10
TU 11
SP (X) 12
HP R 13
HP L 14
SP (Y) 15
TC REG GND 16
TC 5V 17
LINE MUTE 18
RF SWP 19
TC VIDEO IN (X) 20
CN006 22P 1.25 JAE B to B
PB AFM RF 1
AFM GND 2
REC AFM RF 3
DET P 4
VA PB 5
LINE SEL 6
SP/LP 7
IN SEL 8
AU UNREG 9
AU GND 10
SP ON 11
HP ON 12
AFM ACT 13
BILINGUAL ACT 14
MONO ON 15
AVR IN R 16
AVR OUT R 17
AVR GND 18
AVR OUT L 19
AVR IN L 20
DBB ON 21
DBB MAX 22
CN009 15P 1.0 EL FFC
H3 (-) 1
H3 (+) 2
CAP W 3
H2 (-) 4
H2 (+) 5
HE VCC 6
H1 (-) 7
H1 (+) 8
HE GND 9
CAP U 10
CAP V 11
C FG (-) 12
C FG (+) 13
VCC 14
GND 15
TO CAPSTAN MOTOR
FP-274
MOTOR
CN001 15P 1.0 EL FFC
1 COM
2 ME/MP
3 REC PROOF
4 TOP END LED
5 TOP SENS
6 T REEL FG
7 5V
8 REEL LED
9 S REEL FG
10 MODE SW 2
11 MODE SW 1
12 MODE SW 0
13 M OUT 0 (COM)
14 CC DOWN
15 END SENS
FC-02
CN003 15P 1.0 EL FFC
COM 15
ME/MP 14
REC PROOF 13
TOP END LED 12
TOP SENS 11
T REEL FG 10
5V 9
REEL LED 8
S REEL FG 7
MODE SW 2 6
MODE SW 1 5
MODE SW 0 4
M OUT 0 (COM) 3
CC DOWN 2
END SENS 1
UC-6
CN001 13P 1.0 EL FFC
1 S REEL LED
2 5V
3 S REEL FG
4 MODE SW 2
5 MODE SW 1
6 MODE SW 0
7 M OUT 0
8 CC DOWN
9 5V
10 END SENS
11 NC
12 NC
13 N.C.
FP-89
FLEXIBLE BOARD
TO MD
CN002 11P 1.0 EL FFC
1 COM
2 ME/MP
3 MP HG
4 REC PROOF
5 TOP END LED
6 5V
7 TOP SENS
8 T REEL LED
9 T REEL FG
10 5V
11 T REEL LED
FP-90
FLEXIBLE BOARD
TO MD
CN801 18P 1.0 EL FFC
1 REC PCM
2 GND
3 PB PCM
4 REC AFM
5 REC ATF
6 GND
7 PB RF
8 RF SW P
9 SW 5V
10 REC Y
11 REC C
12 REG GND
13 RAMP
14 PCM SEL
15 RP PB 2CH
16 RP PB 1CH
17 FE ON
18 ME/MP
FP-269
CN502 18P 1.0 MO FFC
REC PCM 1
GND 2
PB PCM 3
REC AFM 4
REC ATF 5
GND 6
PB RF 7
RF SW P 8
RP 5V 9
REC Y 10
REC C 11
REG GND 12
RAMP 13
PCM SEL 14
RP PB 2CH 15
RP PB 1CH 16
FE ON 17
ME/MP 18
RP-105
CN501 11P 1.0 FFC
1 GND
2 F.E. (Y)
3 F.E. (X)
4 GND
5 GND
6 CH2 (X)
7 CH2 (Y)
8 GND
9 CH1 (Y)
10 CH1 (X)
11 GND
TO DRUM
FP-273
ROTARY TRANS
CN503 5P 1.25 AMP
1 N.C.
2 PCM RF OUT
3 V RF OUT
4 RF SW P
5 GND
CHECK PIN
CN004 26P 1.25 JAE B to B
2 BL UNREG GND
1 BL UNREG
4 DDP
3 RGB VIDEO (X)
6 -8V
5 +13V
8 LCD GND
7 -20V
10 SW 5V
9 DBB ON
12 REG GND
11 DBB MAX
14 AVR OUT R
13 AVR IN R
16 AVR OUT L
15 AUDIO GND
18 HOLD
17 AVR IN L
20 SD
19 CRT STB
22 JOG VD (Q VD)
21 SCK
24 BL CONT
23 JOG SP
26 AD 1
25 AD 0
FP-27
CN001 26P 1.0 EL FFC
BL UNREG 26
BL UNREG GND 25
RGB VIDEO (X) 24
DDP 23
+13V 22
-8V 21
-20V 20
LCD GND 19
DBB ON 18
SW 5V 17
DBB MAX 16
REG GND 15
AVR IN R 14
AVR OUT R 13
AUDIO GND 12
AVR OUT L 11
AVR IN L 10
HOLD 9
CRT STB L 8
SD 7
SCK 6
JOG VD (Q VD) 5
JOG SP 4
BL CONT 3
AD 0 2
AD 1 1
RG-22
CN002 16P 1.0 MO FFC (ZIF)
1 W/H
2 Q VD
3 VSY
4 NTP
5 V COM
6 VSL -8V
7 VSH +5V
8 GND
9 G
10 R
11 B
12 VGL -20V
13 VGH 13V
14 CSY
15 FRP
16 HSY
FC-06
LCD UNIT
CN501 10P 1.0 MO FFC (ZIF)
1 CLOCK SET
2 TIMER SET
3 UP
4 REG GND
5 SLEEP
6 LCD ON/OFF
7 COUNTER RESET
8 NEXT
9 TIMER REC
10 DATA SCREEN
SW BLOCK
CN901 3P L 1.0 SMK
UNREG GND 1
BL CONT 2
BL UNREG 3
DC-AC INVERTER UNIT
BL901 BACK LIGHT
CN007 16P 1.0 EL FFC
1 CAP UNREG
2 LD UNREG
3 LD UNREG
4 CHARGE START
5 SS UNREG
6 SS UNREG
7 CHARGE
8 CAM UNREG
9 CAM UNREG
10 EVER 5V
11 DD UNREG
12 BL UNREG
13 UN GND
14 UN GND
15 UN GND
16 UN GND
FC-01
W701 16P 1.0
CAP UNREG 16
LD UNREG 15
LD UNREG 14
CHARGE START 13
SS UNREG 12
SS UNREG 11
CHARGE 10
CAMERA UNREG 9
CAMERA UNREG 8
EVER 5V 7
DD UNREG 6
BL UNREG 5
UN GND 4
UN GND 3
UN GND 2
UN GND 1
DC-22P
CN008 15P 1.0 MO FFC (ZIF)
1 GND
2 D PG
3 D PG
4 D FG
5 D FG
6 GND
7 D COM
8 DRUM W
9 DRUM V
10 DRUM U
11 LOAD
12 UNLOAD
13 GND
14 DEW
15 LM 5V
FP-272
M901
DRUM MOTOR
DEW
M903
LOADING MOTOR

GV-200B

FRAME

4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

- **For printed wiring boards.**
- ● : Through hole.
- : Pattern from the side which enables seeing.
- : Pattern of the rear side.
- Circled numbers refer to waveforms.
- The part codes and the part names for correction of the semiconductor on the print board are described in the space of each print figure. Please use it when ordering parts.

- **For schematic diagram.**
- **Caution when replacing chip parts.**
  New parts must be attached after removal of chip.
  Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat.
- All resistors are in ohms, 1/4W or less unless otherwise noted.
  kΩ: 1000Ω, MΩ: 1000kΩ.

- All capacitors are in μF unless otherwise noted. pF : μμF.
  50V or less are not indicated except for electrolytics and tantalums.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ▭ : nonflammable resistor.
- ▭ : fusible resistor.
- ▭ : panel designation.
- △ : internal component.
- ▭ : adjustment for repair.
- —— : B + Line
- - - - : B – Line.
- Circled numbers refer to waveforms.
- ⇨ : IN/OUT direction of B (+, –) line.
- The voltage value is the reference value to the ground when the color bar signal (RF signal) is input tuner from the color bar generator. (Tester for use : DC10mΩ)

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

[TEST MODE]
This unit selects the test mode by shorting and opelting the terminals of CN802 on the KB-10P BOARD. When servicing, attaching the "test mode set jig" (J-6082-110-A) to the CN802 allows to select twelve types of test mode with the hexadecimal selecting switches.
See to"3-8. Test Mode" on page 41 for details.

IC501	8-7
Q501	8-7
Q502	8-7
Q581	8-7
Q582	8-7

RP-105 (REC/PB AMP) PRINTED WIRING BOARD
— Ref. No, RP-105 BOARD : 1000 series —

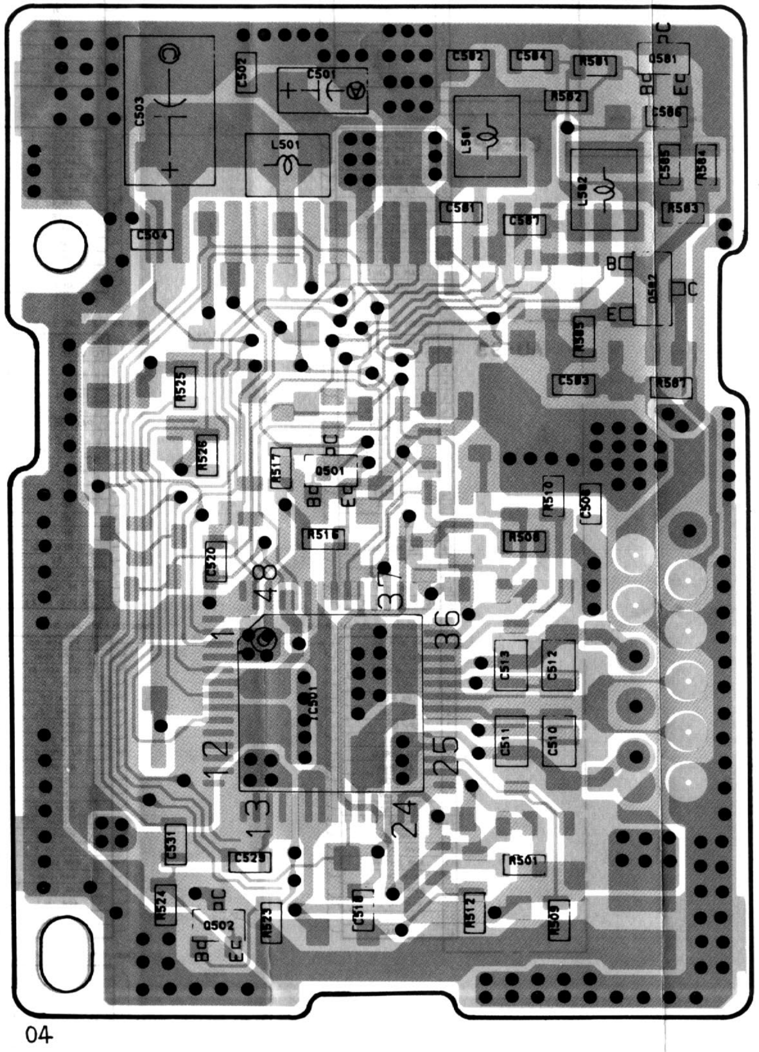
< IC >

IC501	8-752-033-38	CXA1202R

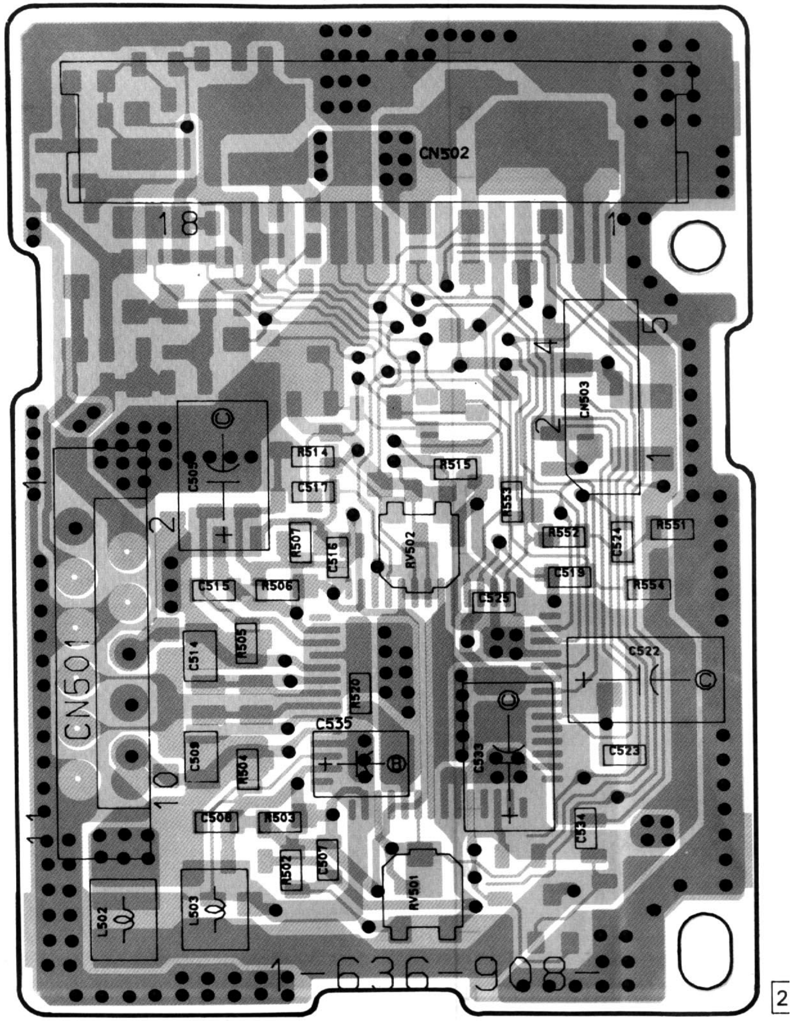
< TRANSISTOR >

Q501	8-729-905-12	DTA144EU
Q502	8-729-905-35	2SC4081-R
Q581	8-729-905-23	2SA1576-R
Q582	8-729-820-76	2SA1179-M5M6

RP-105 BOARD (CONDUCTOR SIDE)

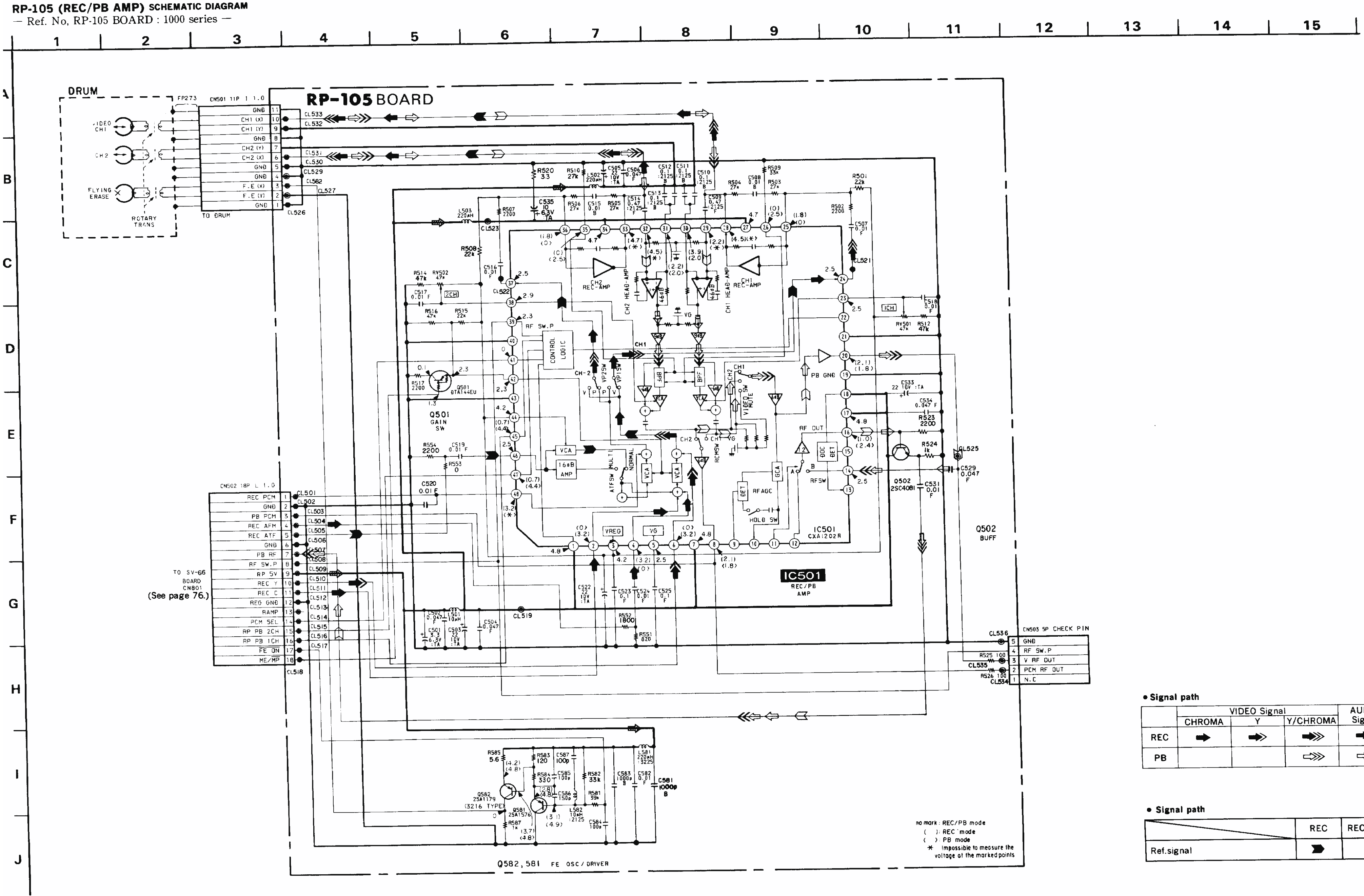

C503
C502
C501
C582
C584
R581
Q581
R582
C586
L501
L581
L582
C585
R584
C581
C587
R583
C504
Q582
R585
C583
R587
R525
R526
R517
Q501
R516
R510
C506
R508
C520
48
37
36
1
IC501
C513
C512
12
25
C511
C510
13
24
C531
C529
R501
R524
Q502
R523
C518
R512
R505
04

RP-105 BOARD (COMPONENT SIDE)


CN502
18
1
5
4
CN503
2
1
C505
R514
R515
C517
R553
R507
C516
RV502
R552
C524
R551
C515
R506
C519
R554
C525
CN501
11
10
2
C514
R505
C522
R520
C535
C533
C509
R504
C523
C508
R503
C534
L502
L503
R502
C507
RV501
1-636-908-
2

RP-105 (REC/PB AMP) SCHEMATIC DIAGRAM

— Ref. No, RP-105 BOARD : 1000 series —



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A
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D
E
F
G
H
I
J
DRUM
VIDEO CH1
CH2
FLYING ERASE
ROTARY TRANS
FP273
CN501 11P
GND
CH1 (X)
CH1 (Y)
GND
CH2 (Y)
CH2 (X)
GND
GND
F.E (X)
F.E (Y)
GND
TO DRUM
RP-105 BOARD
CL533
CL532
CL531
CL530
CL529
CL582
CL527
CL526
CL523
CL522
CL521
CL519
CL525
R520 3.3
R510 27k
L502 220μH
C505 22 10V TA
C506 0.047 F
C512 0.1 2125
C511 0.1 2125
C510 0.1 2125
R509 33k
R504 27k
C508 0.01 B
R503 27k
R501 22k
R502 2200
C507 0.01 F
C535 10 6.3V TA
L503 220μH
R507 2200
R506 27k
C515 0.01 B
R505 27k
C514 0.47 2125
C513 0.1 2125
C509 0.47 2125
R508 22k
C516 0.01 F
R514 47k
RV502 47k
C517 0.01 F
2CH
R516 47k
R515 22k
CH2 REC-AMP
CH2 HEAD-AMP
CH1 HEAD-AMP
CH1 REC-AMP
46dB
VG
C518 0.01 F
1CH
RV501 47k
R512 47k
RF SW.P
CONTROL LOGIC
CH1
CH-2
VPZSW
BPF
VIDEO MUTE
PB GND
C533 22 10V TA
C534 0.047 F
R523 2200
R524 1k
C529 0.047 F
Q502 2SC4081
C531 0.01 F
Q502 BUFF
R517 2200
Q501 BTA144EU
Q501 GAIN SW
R554 2200
C519 0.01 F
R553 0
C520 0.01 F
VCA
16dB AMP
ATFSW
MULTI
NORMAL
VCA
VCA
RCMSW
RF OUT
DOC DET
GCA
RFSW
DET
RF AGC
HOLD SW
IC501 CXA1202R
VREG
VG
IC501 REC/PB AMP
C522 22 10V TA
C523 0.1 F
C524 0.01 F
C525 0.1 F
R552 1800
R551 820
C502 0.047 F
L501 10μH
C501 3.3 6.3V TA
C503 22 10V TA
C504 0.047 F
CN502 18P
REC PCM
GND
PB PCM
REC AFM
REC ATF
GND
PB RF
RF SW.P
RP SV
REC Y
REC C
REG GND
RAMP
PCM SEL
RP PB 2CH
RP PB 1CH
FE ON
ME/MP
CL501
CL502
CL503
CL504
CL505
CL506
CL507
CL508
CL509
CL510
CL511
CL512
CL513
CL514
CL515
CL516
CL517
CL518
TO SV-66 BOARD CN801 (See page 76.)
CN503 5P CHECK PIN
CL536
CL535
CL534
GND
RF SW.P
V RF OUT
PCM RF OUT
N.C
R525 100
R526 100
R585 5.6
R583 120
C587 100p
R584 330
C585 100p
C586 150p
R582 33k
R581 39k
C583 1000p B
C582 0.01 F
L581 220μH 3225
C581 1000p B
L582 10μH 2125
C584 100p
Q582 2SA1179 (3216 TYPE)
Q581 2SA1576
R587 1k
Q582, 581 FE OSC/DRIVER

no mark : REC/PB mode
( ): REC mode
( ): PB mode
* Impossible to measure the voltage at the marked points

- **Signal path**

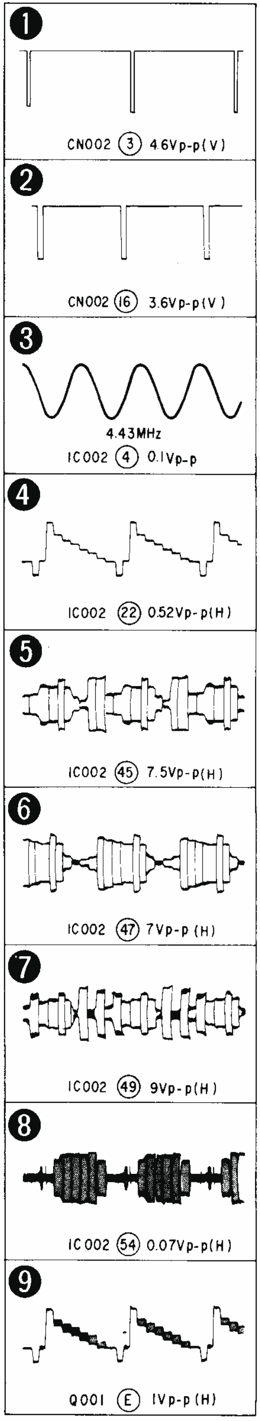
	VIDEO Signal			AUDIO Signal
	CHROMA	Y	Y/CHROMA	
REC	➡	➡≫	➡⋙	➡
PB			⇨⋙	⇨

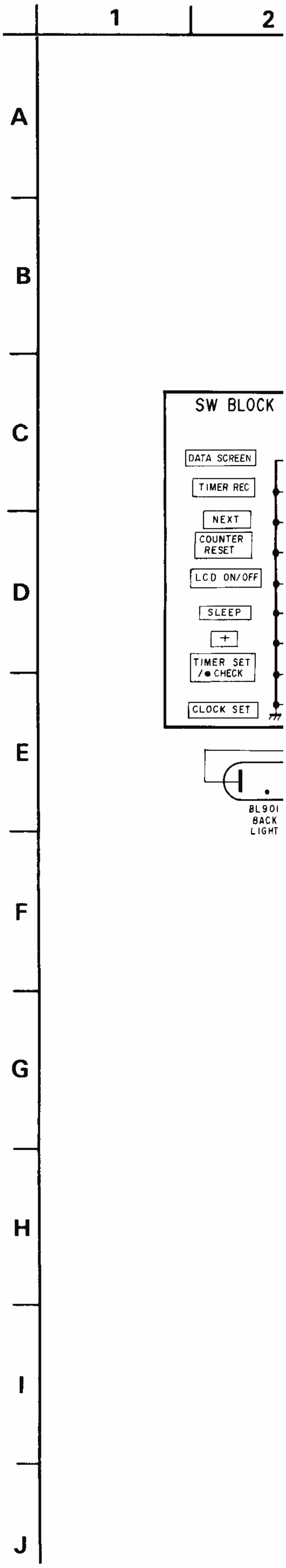
- **Signal path**

	REC	REC/PB	PB
Ref.signal	➤		▷

RG-22 (LCD VIDEO (R. G.
— Ref. No, RG-22 BOARD :

RG-22 BOARD (E-E mode)




1
2
A
B
C
D
E
F
G
H
I
J
SW BLOCK
DATA SCREEN
TIMER REC
NEXT
COUNTER RESET
LCD ON/OFF
SLEEP
+
TIMER SET /● CHECK
CLOCK SET
BL901
BACK LIGHT

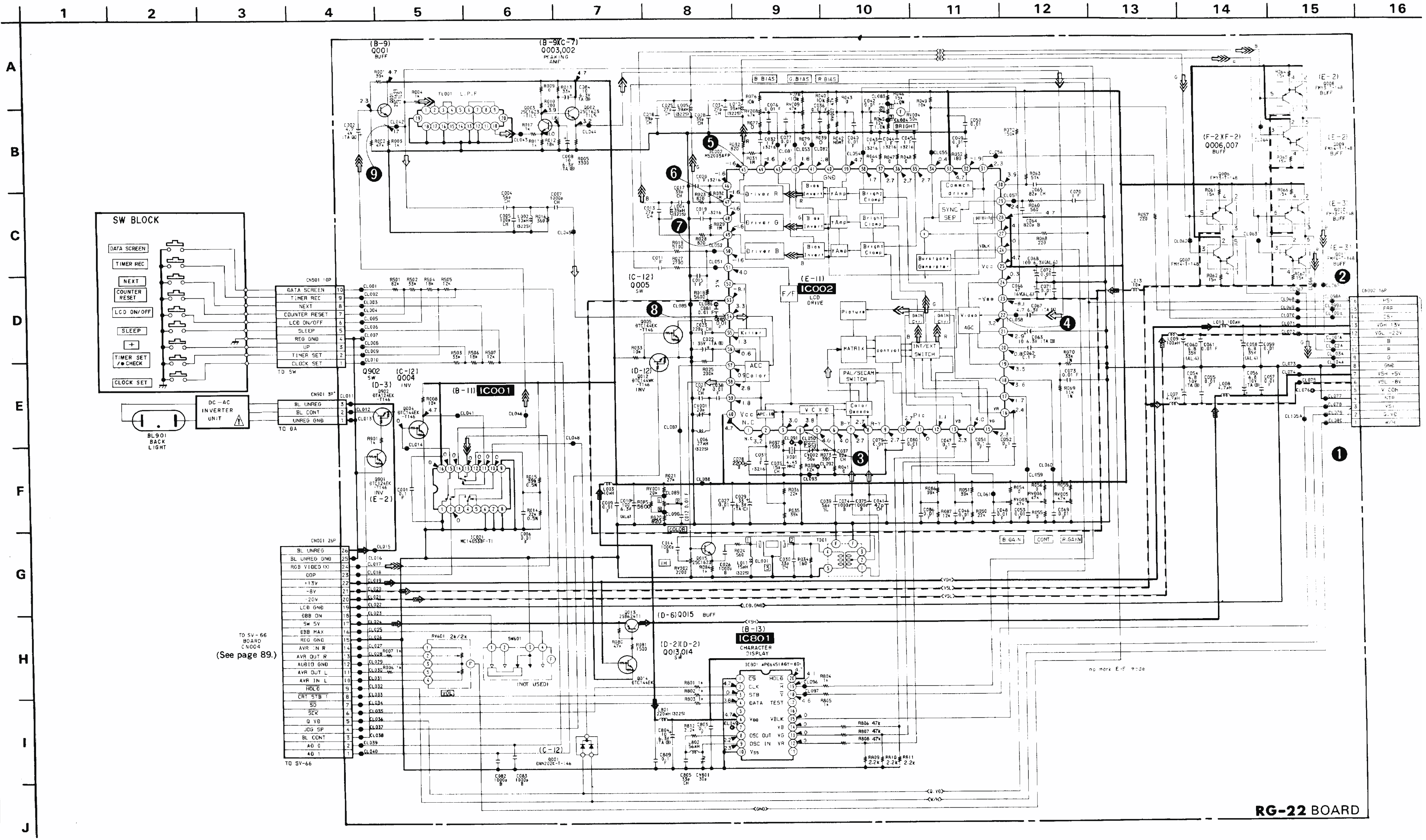
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	**Note:** Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- **Signal path**

	VIDEO Signal		
	CHROMA	Y	Y/CHROMA
PB	⇨	⇨≫	⇨⋙

RG-22 (LCD VIDEO (R. G. B.)) SCHEMATIC DIAGRAM

— Ref. No, RG-22 BOARD : 2000 series —

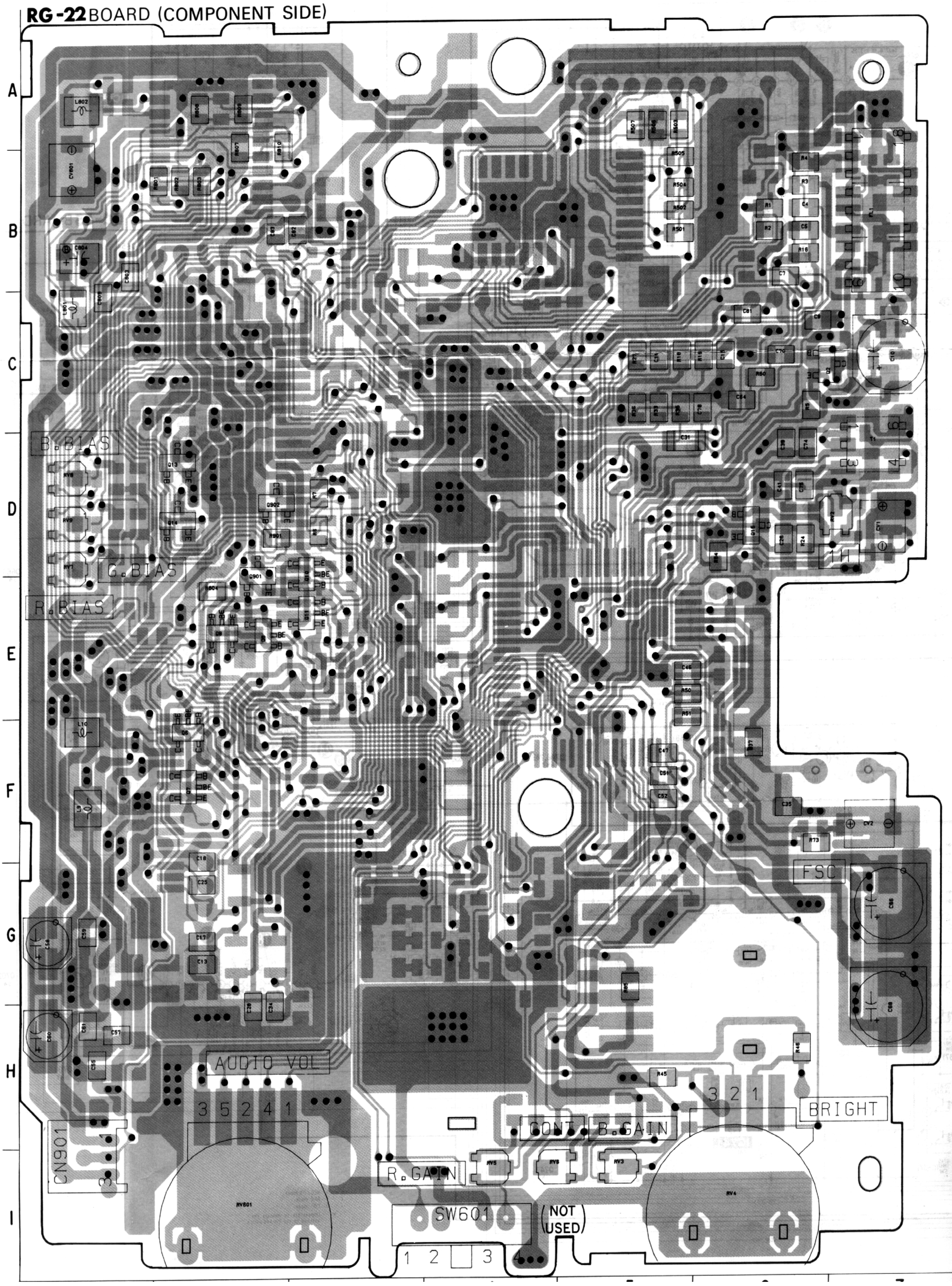


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
A B C D E F G H I J
SW BLOCK
DATA SCREEN
TIMER REC
NEXT
COUNTER RESET
LCD ON/OFF
SLEEP
TIMER SET /● CHECK
CLOCK SET
CN501 10P
TO SW
BL901 BACK LIGHT
DC-AC INVERTER UNIT
CN901 3P
BL UNREG
BL CONT
UNREG GND
TO 0A
CN001 26P
TO SV-66 BOARD CN004
(See page 89.)
TO SV-66
(B-9) Q001 BUFF
(B-9)(C-7) Q003,002 PEAKING AMP
TL001 L.P.F
Q902 SW (D-3)
(C-12) Q004 INV
Q901 INV (E-2)
(B-11) IC001
IC001 MC14053BF-T1
(C-12) Q005 SW
(D-12) Q012 INV
(E-11) IC002 LCD DRIVE
Driver R
Driver G
Driver B
Bias Invert
γ Amp
Bright Clamp
Common drive
SYNC SEP
Burst gate Generator
Picture
MATRIX
control
INT/EXT SWITCH
PAL/SECAM SWITCH
Killer
ACC
Color
VCXO
Color Decode
GAIN Ctrl
Video AGC
B BIAS
G BIAS
R BIAS
BRIGHT
COLOR
B GAIN
CONT
R GAIN
(F-2)(F-2) Q006,007 BUFF
(E-2) Q008 BUFF
(E-2) Q009 BUFF
(E-3) Q010 BUFF
(E-3) Q011 BUFF
CN702 16P
(D-6) Q015 BUFF
(B-13) IC801 CHARACTER DISPLAY
IC801 μPD6451AGT-601
(D-2)(D-2) Q013,014 SW
RV601 2k/2k
VOL
SW601
(NOT USED)
(C-12)
D001 DAN202K-T-146
no mark E-F mode
RG-22 BOARD

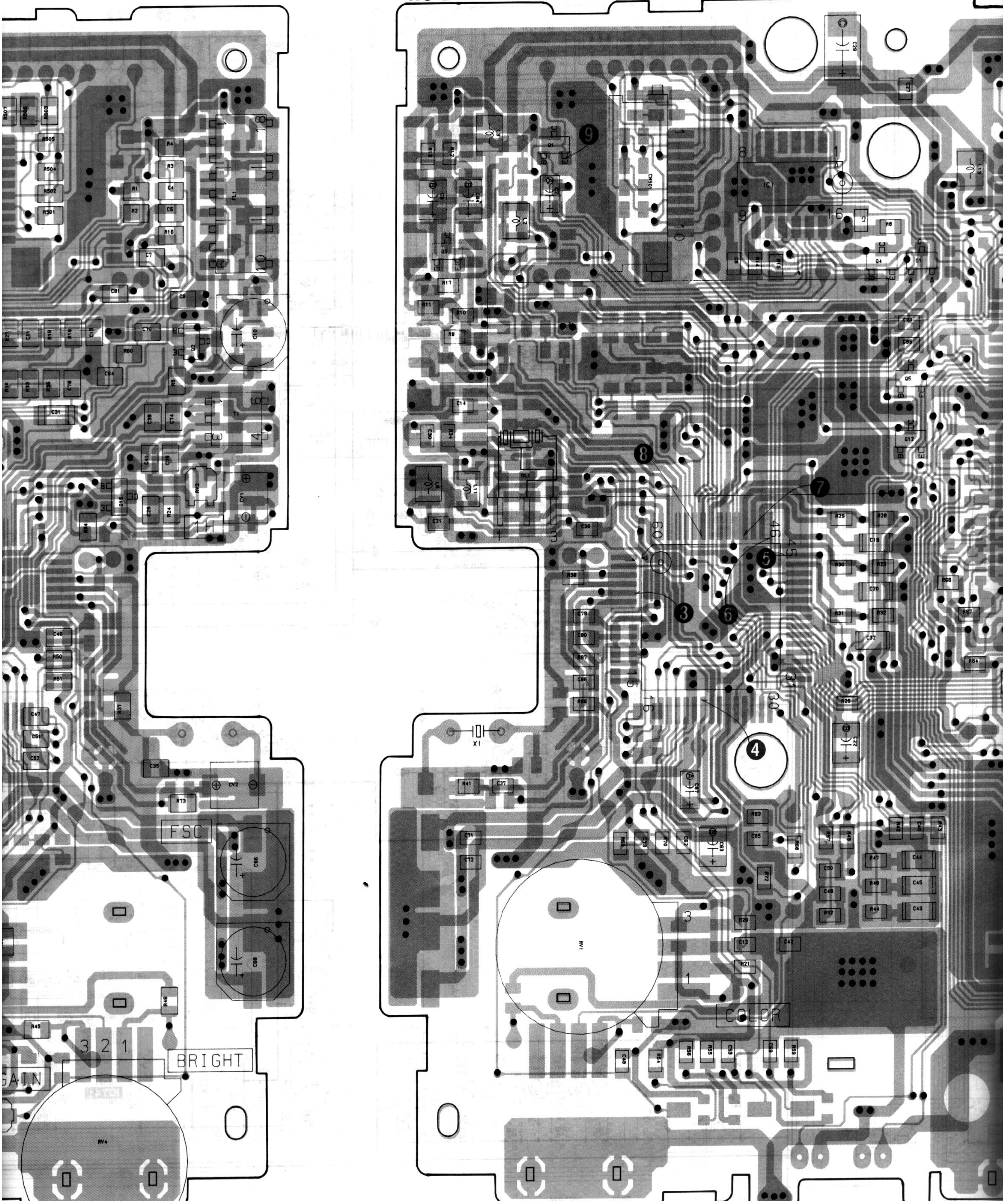
LCD VIDEO LCD VIDEO

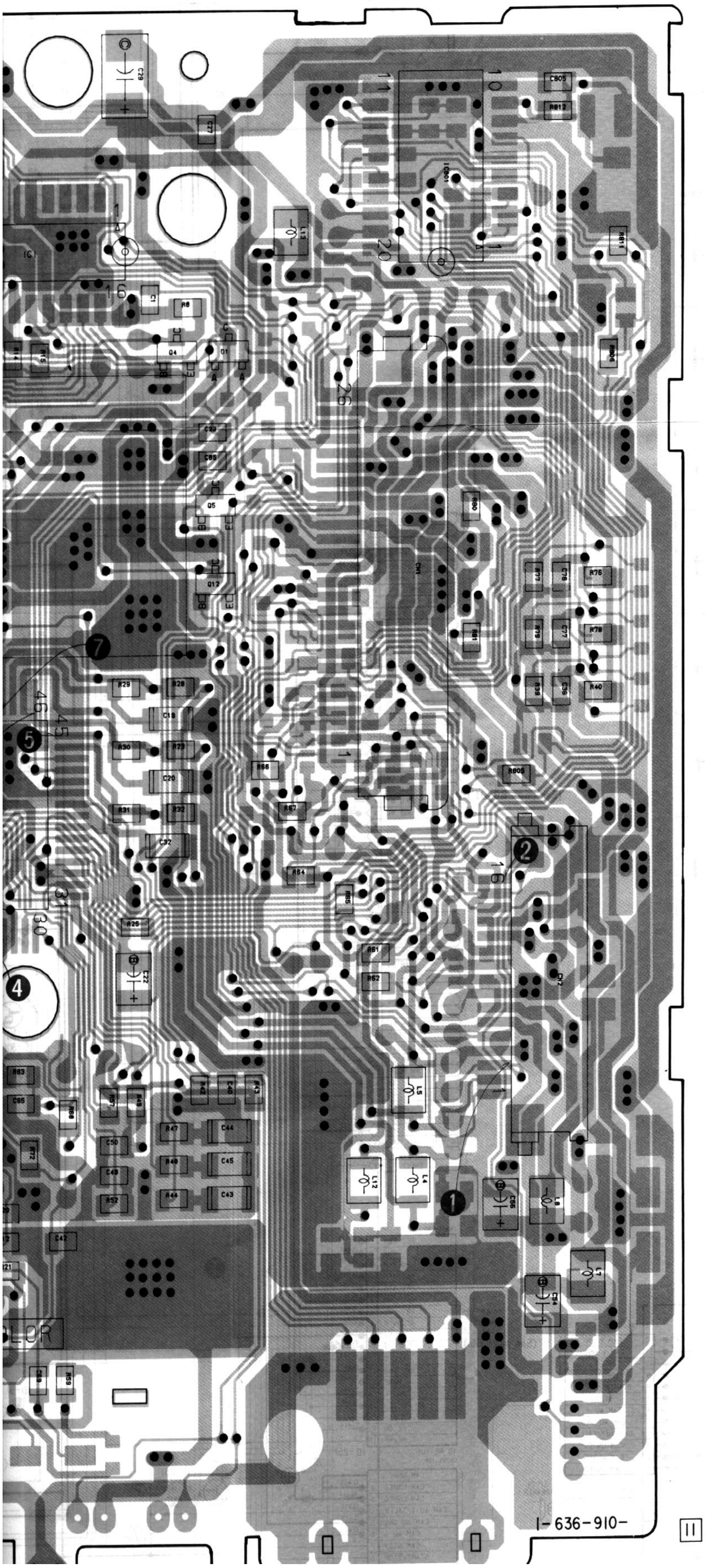
RG-22 (LCD VIDEO (R. G. B.)) PRINTED WIRING BOARD
— Ref. No, RG-22 BOARD : 2000 series —

RG-22 BOARD (COMPONENT SIDE)


A
B
C
D
E
F
G
H
I
B.BIAS
G.BIAS
R.BIAS
AUDIO VOL
3 5 2 4 1
CN901
RV601
R.GAIN
SW601
1 2 3
NOT USED
CONT
B.GAIN
BRIGHT
3 2 1
RV5
RV6
RV3
RV4
FSC
CV2
CV601
C10
C88
C68
C56
C60
L802
L801
L10
L9
Q13
Q14
Q902
Q901
Q6
Q7
Q15
Q2
T1
R45
R48
R73
C35
C18
C25
C17
C13

RG-22 BOARD(CONDUCTOR SIDE)


FSC
BRIGHT
GAIN
COLOR
RV1
RV4
X1
CV1
CV2
IC1
CN501
C29
C22
3 2 1



< DIODE >

D001	8-719-400-18	MA152WK

< IC >

IC001	8-759-009-07	MC14053BF
IC002	8-759-635-37	M52003AFP
IC801	8-759-150-07	uPD6451AGT-601

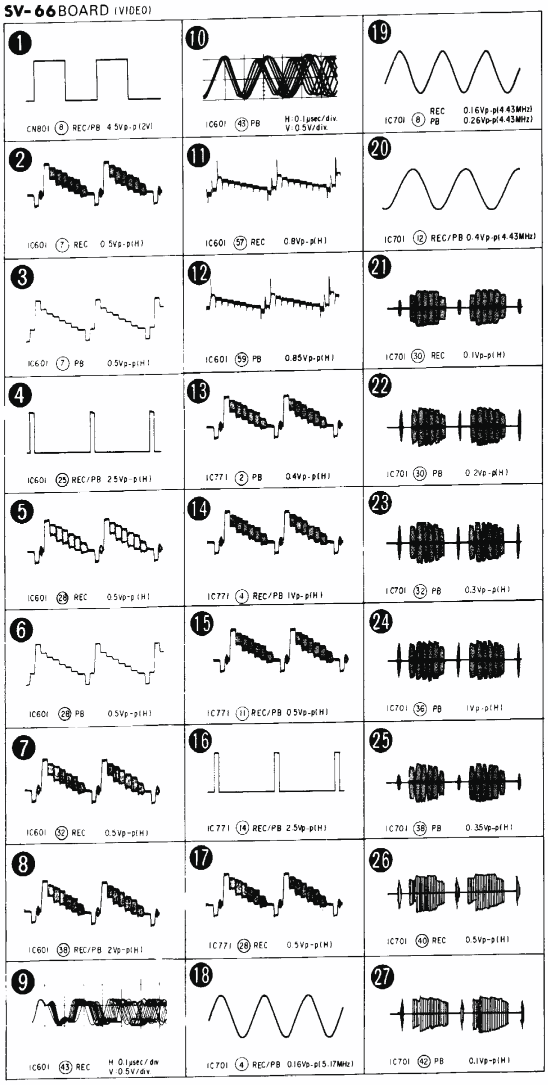
< TRANSISTOR >

Q001	8-729-100-66	2SC1623
Q002	8-729-100-66	2SC1623
Q003	8-729-100-66	2SC1623
Q004	8-729-901-01	DTC144EK
Q005	8-729-901-01	DTC144EK
Q006	8-729-904-41	FMY3
Q007	8-729-904-44	FMY4
Q008	8-729-904-41	FMY3
Q009	8-729-904-44	FMY4
Q010	8-729-904-41	FMY3
Q011	8-729-904-44	FMY4
Q012	8-729-901-03	DTC144WK
Q013	8-729-141-48	2SB624-BV345
Q014	8-729-901-01	DTC144EK
Q015	8-729-100-66	2SC1623
Q901	8-729-901-00	DTC124EK
Q902	8-729-901-05	DTA124EK

CC-55 (CCD), CN-6P (CAMERA CONNECTOR), SV-66(VIDEO) SCHEMATIC DIAGRAM

— Ref. No. CN-6P BOARD : 3000 series, CC-55 and SV-66 BOARDS : 5000series —

SV-66 BOARD (VIDEO)

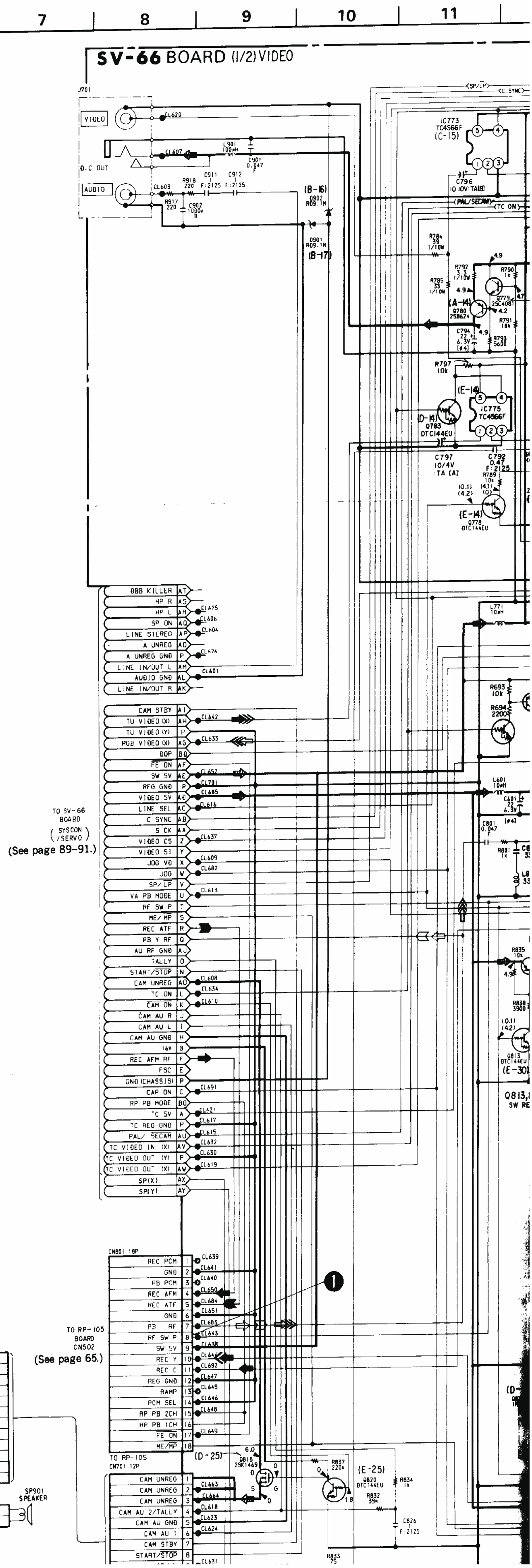


• Signal path

	VIDEO Signal			AUDIO Signal
	CHROMA	Y	Y/CHROMA	
REC	➡	➡»	➡⋙	➡
PB	⇨	⇨»	⇨⋙	⇨

• Signal path

	REC	REC/PB	PB
Ref.signal	➤	➢	▷



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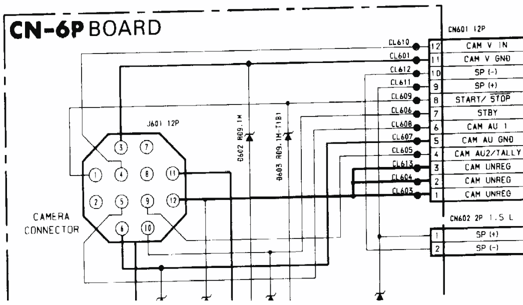
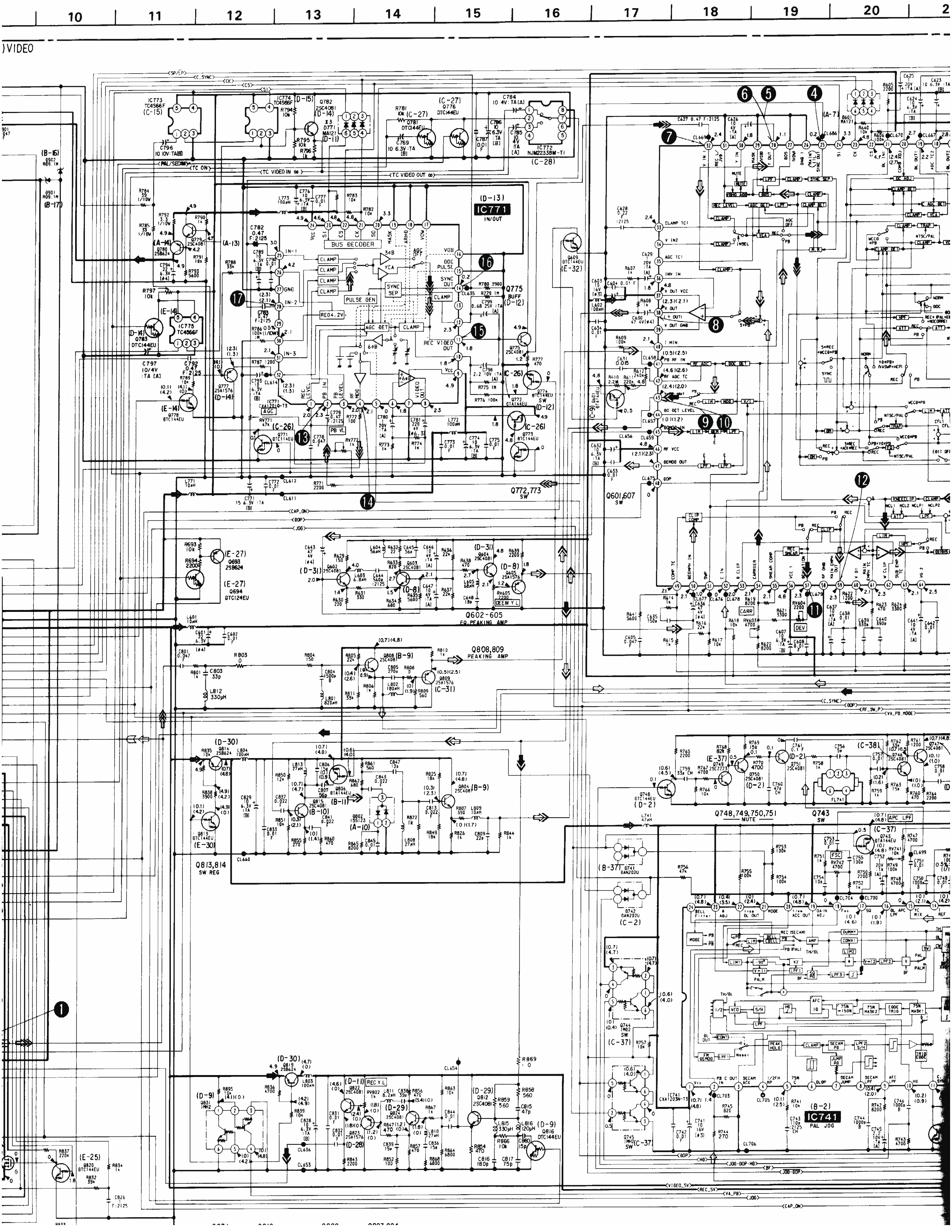
J
K
L
M
N
SV-66 BOARD (1/2) VIDEO
J701
VIDEO
CL620
D.C OUT
CL607
L901 100μH
C901 0.047 F
AUDIO
CL603
R918 220
C911 1 F:2125
C912 1 F:2125
R917 220
C902 1000p B
(B-16)
D902 RD9.1M
D901 RD9.1M
(B-17)
<SP/LP>
<C_SYNC>
IC773 TC4S66F
(C-15)
C796 10 10V:TA[B]
<PAL/SECAM>
<TC ON>
R784 39 1/10W
R792 3.3 1/10W
R790 1k
R785 33 1/10W
4.9
4.7
Q779 2SC4081
(A-14)
Q780 2SB624
4.2
R791 18k
C794 22 6.3V [#4]
R793 5600
R797 10k
(E-14)
IC775 TC4S66F
(D-14)
Q783 DTC144EU
C797 10/4V :TA [A]
C792 0.47 F:2125
R789 10k
(0.1) (4.2)
(4.1) (0)
Q778 DTC144EU
L771 10μH
R693 10k
R694 2200
L601 10μH
C601 22 6.3V [#4]
C801 0.047 F
R801 1k
R835 10k
4.9
R838 3900
(0.1) (4.2)
Q813 DTC144EU
(E-30)
Q813, SW RE
DBB KILLER AT
HP R AS
HP L AR CL675
SP ON AQ CL606
LINE STEREO AP CL604
A UNREG AD
A UNREG GND P CL676
LINE IN/OUT L AM
AUDIO GND AL CL601
LINE IN/OUT R AK
CAM STBY AI
TU VIDEO (X) AH CL642
TU VIDEO (Y) P
RGB VIDEO (X) AG CL633
DOP BQ
FE ON AF
SW 5V AE CL652
REG GND P CL701
VIDEO 5V AD CL685
LINE SEL AC CL616
C SYNC AB
S CK AA
VIDEO CS Z CL637
VIDEO SI Y
JOG VD X CL609
JOG W CL682
SP/LP V
VA PB MODE U CL613
RF SW P T
ME/MP S
REC ATF R
PB Y RF Q
AU RF GND AJ
TALLY O
START/STOP N
CAM UNREG AO CL608
TC ON L CL634
CAM ON K CL610
CAM AU R J
CAM AU L I
CAM AU GND H
16V G
REC AFM RF F
FSC E
GND (CHASSIS) P
CAP ON C CL691
RP PB MODE BO
TC 5V A CL621
TC REG GND P CL617
PAL/SECAM AU CL615
TC VIDEO IN (X) AV CL632
TC VIDEO OUT (Y) P CL630
TC VIDEO OUT (X) AW CL619
SP(X) AX
SP(Y) AY
TO SV-66 BOARD (SYSCON /SERVO)
(See page 89-91.)
CN801 18P
REC PCM 1 CL639
GND 2 CL641
PB PCM 3 CL640
REC AFM 4 CL650
REC ATF 5 CL684
GND 6 CL651
PB RF 7 CL683
RF SW P 8 CL643
SW 5V 9 CL638
REC Y 10 CL644
REC C 11 CL692
REG GND 12 CL647
RAMP 13 CL645
PCM SEL 14 CL646
RP PB 2CH 15 CL648
RP PB 1CH 16
FE ON 17 CL649
ME/MP 18
TO RP-105 BOARD CN502
(See page 65.)
TO RP-105 CN701 12P
CAM UNREG 1
CAM UNREG 2 CL663
CAM UNREG 3 CL664
CAM AU 2/TALLY 4 CL618
CAM AU GND 5 CL623
CAM AU 1 6 CL624
CAM STBY 7
START/STOP 8
CL631
(D-25)
6.0
Q818 2SK1469
D S G
0
R837 220k
(E-25)
Q820 DTC144EU
1.8
R834 1k
R832 39k
C826 1 F:2125
R833 75
(D-



CN-6P BOARD
J601 12P
CAMERA CONNECTOR
D602 RD9.1M
D603 RD9.1M-T1B1
CN601 12P
CL610 12 CAM V IN
CL601 11 CAM V GND
CL612 10 SP (-)
CL611 9 SP (+)
CL609 8 START/STOP
CL606 7 STBY
CL608 6 CAM AU 1
CL607 5 CAM AU GND
CL605 4 CAM AU2/TALLY
CL613 3 CAM UNREG
CL604 2 CAM UNREG
CL603 1 CAM UNREG
CN602 2P 1.5 L
1 SP (+)
2 SP (-)
SP901 SPEAKER

10
11
12
13
14
15
16
17
18
19
20
2
)VIDEO
IC773 TC4S66F (C-15)
IC774 TC4S66F
IC771 CXA1201Q-T3
(D-13) IC771 IN/OUT
BUS DECODER
CLAMP
YCA
SYNC SEP
PULSE GEN
REG4.2V
AGC DET
REC VIDEO OUT
VIDEO
AGC
PB VL
Q775 BUFF (D-12)
IC772 NJM2233BM-T1 (C-28)
IC775 TC4S66F
Q772,773 SW
Q601,607 SW
Q602-605 EQ,PEAKING AMP
DEEM Y L
Q808,809 PEAKING AMP
Q813,814 SW REG
Q748,749,750,751 MUTE
Q743 SW
APC LPF
IC741 CXA1203N-T3 PAL JOG
FL741
REC Y L
DEV
CARR
❶
❹
❺
❻
❼
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❾
❿
⓫
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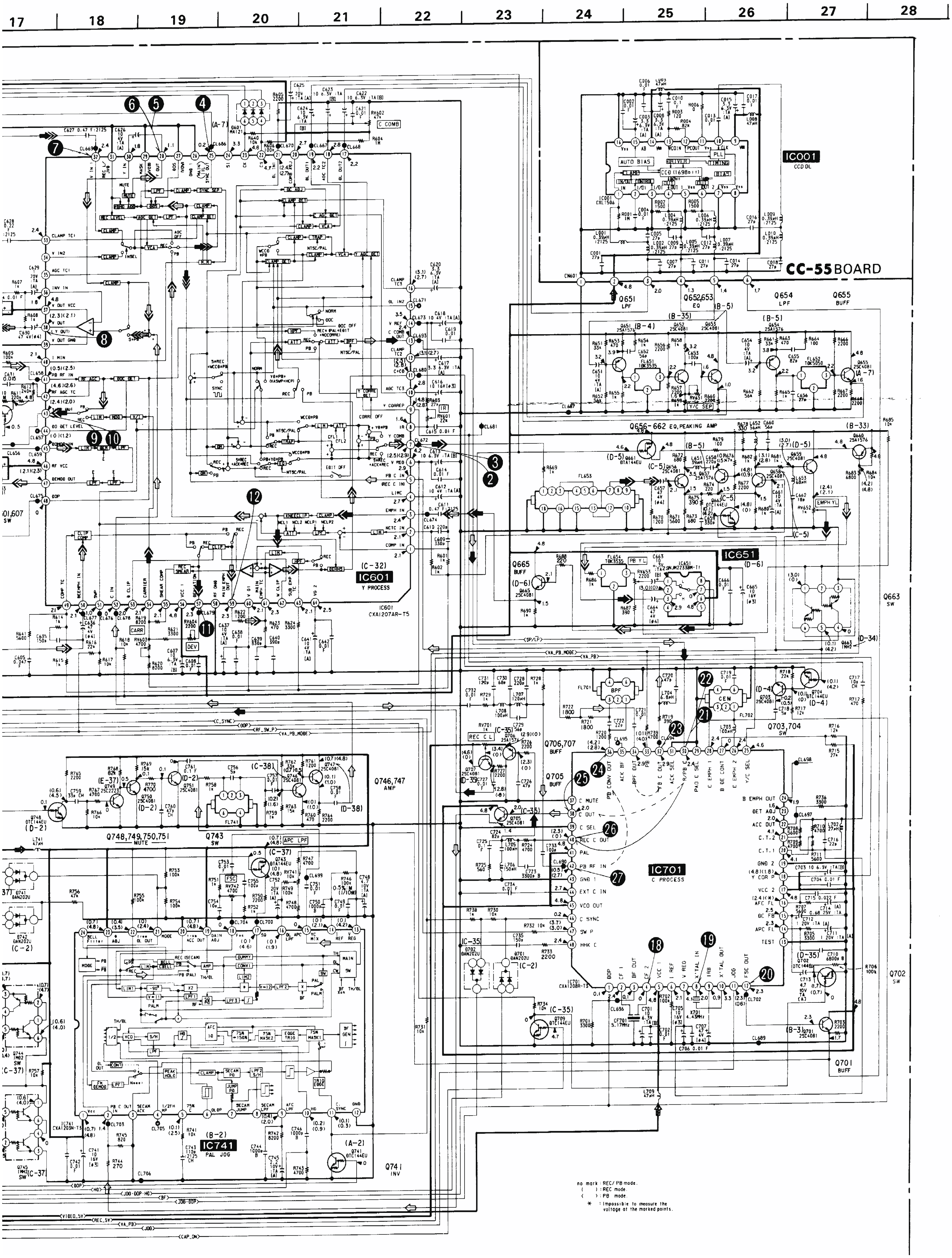

17
18
19
20
21
22
23
24
25
26
27
28
IC001
CCD DL
CC-55 BOARD
CXL1506
AUTO BIAS
DRIVER
PLL
TIMING
CLAMP
CCD (1698bit)
BIAS
Q651
LPF
Q652,653
EQ
Q654
LPF
Q655
BUFF
Q656-662 EQ,PEAKING AMP
IC601
Y PROCESS
CXA1207AR-T5
Q665
BUFF
IC651
Q663
SW
IC701
C PROCESS
CXA1208R-T3
Q703,704
SW
Q706,707
BUFF
Q705
BUFF
Q701
BUFF
Q702
SW
Q746,747
AMP
Q748,749,750,751
MUTE
Q743
SW
IC741
PAL JOG
CXA1203N-T3
Q741
INV
Q745
1MHz
SW
FL741
FL701
BPF
FL702
CEM
FL651
FL653
FL654
PB YL
EMPH YL
Y/C SEP
APC LPF
C COMB
CARR
DEV
CLIP COMP
REC SMEAR
<SP/LP>
<VA_PB_MODE>
<VA_PB>
<C_SYNC>
<DOP>
<RF_SW_P>
<HD>
<JOG-DOP-HD>
<BF>
<JOG-DOP>
<VIDEO_5V>
<REC_5V>
<JOG>
<CAP_ON>

no mark : REC/ PB mode.
( ) : REC mode.
⟨ ⟩ : PB mode.
＊ : Impossible to measure the voltage at the marked points.

D901	8-719-106-44	RD9. 1M-B2
D902	8-719-106-44	RD9. 1M-B2

IC772	8-759-710-86	NJM2233BM
IC773	8-759-234-77	TC4S66F
IC774	8-759-234-77	TC4S66F
IC775	8-759-234-77	TC4S66F

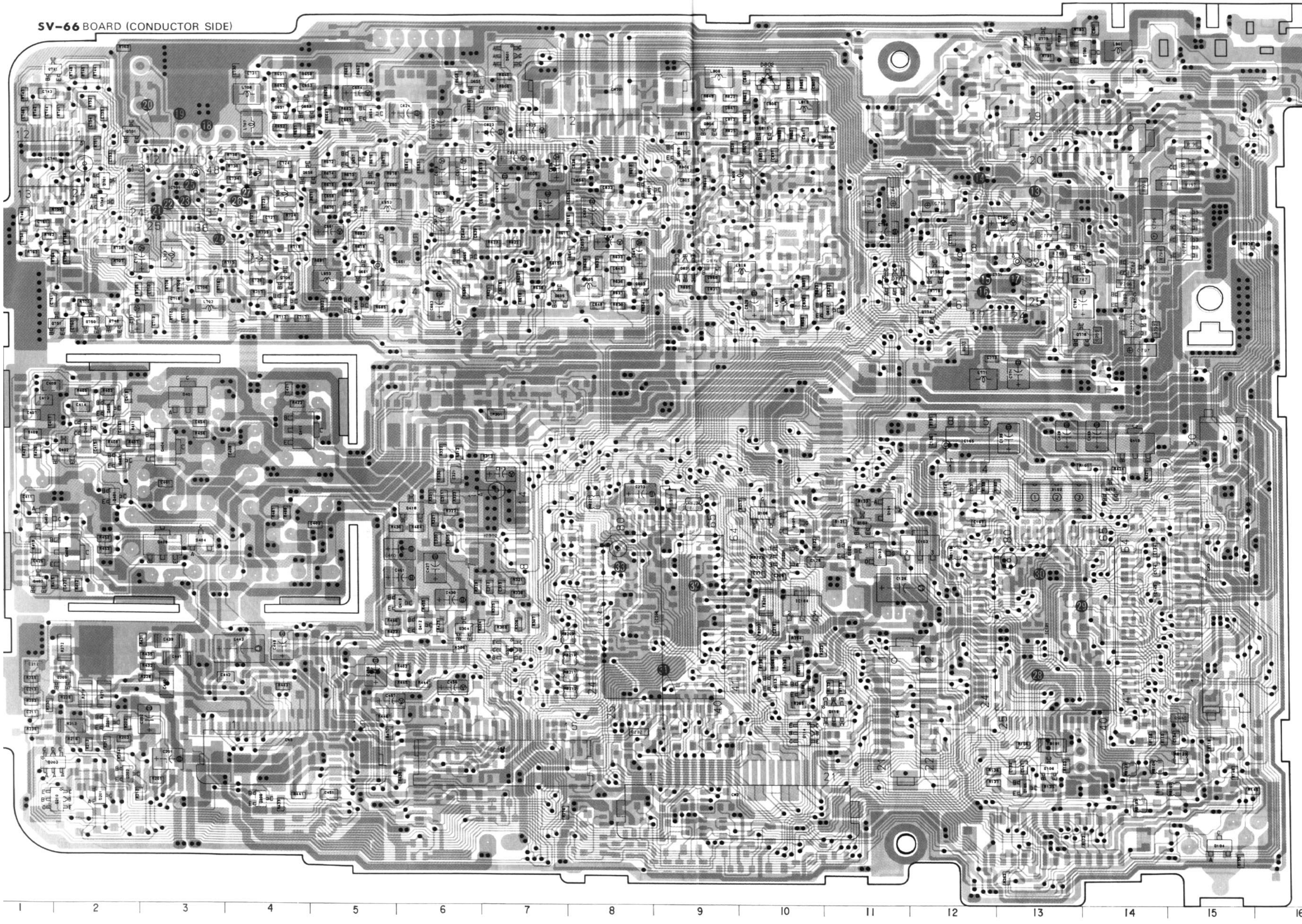
Q208	8-729-820-46	2SB1202FAS
Q209	8-729-905-35	2SC4081-R
Q210	8-729-403-24	XN4210

Q410	8-729-805-25	2S
Q410	8-729-805-27	2S
Q411	8-729-805-25	2S
Q411	8-729-805-27	2S
Q412	8-729-905-35	2S

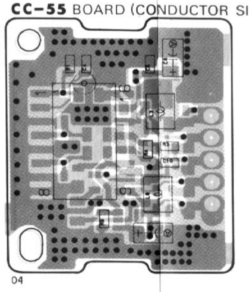
55 (CCD), CN-6 (CAMERA CONNECTOR), SV-66(VIDEO) PRINTED WIRING BOARDS

ef. No, CN-6 BOARD : 3000 series, CC-55 and SV-66 BOARDS : 5000series —

SV-66 BOARD (CONDUCTOR SIDE)

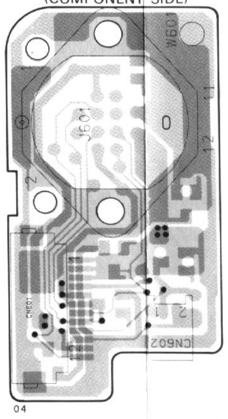


CC-55 BOARD (CONDUCTOR SIDE)



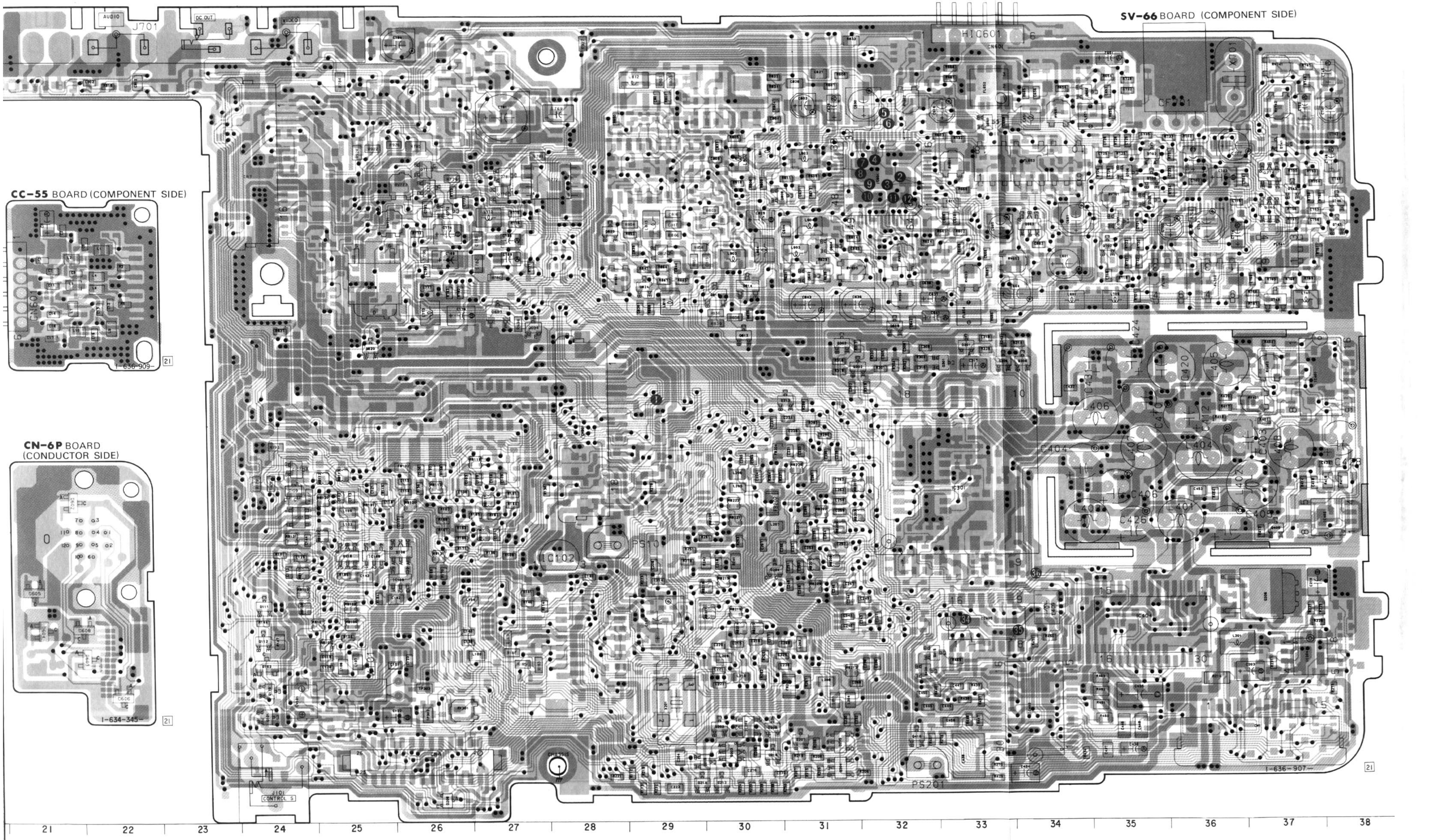
IC001	8-752-

CN-6P BOARD (COMPONENT SIDE)



D602	8-719-
D603	8-719-
D604	8-719-
D605	8-719-
D606	8-719-
D608	8-719-

Q663	8-729-920-48	IMH2
Q665	8-729-905-35	2SC4081-R
Q693	8-729-141-48	2SB624-BV345
Q694	8-729-905-61	DTC124EU
Q701	8-729-905-35	2SC4081-R
Q702	8-729-905-18	DTC144EU
Q779	8-729-905-35	2SC4081-R
Q780	8-729-141-48	2SB624-BV345
Q781	8-729-905-18	DTC144EU
Q782	8-729-905-35	2SC4081-R
Q783	8-729-905-18	DTC144EU
Q804	8-729-905-35	2SC4081-R


SV-66 BOARD (COMPONENT SIDE)
CC-55 BOARD (COMPONENT SIDE)
CN-6P BOARD (CONDUCTOR SIDE)
AUDIO
J701
DC OUT
VIDEO
HIC601
CF301
X701
CN601
IC102
PS101
PS201
J101
CONTROL S
1-636-907-
1-636-909-
1-634-345-
21
22
23
24
25
26
27
28
29
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31
32
33
34
35
36
37
38

D902	8-719-106-44	RD9. 1M-B2

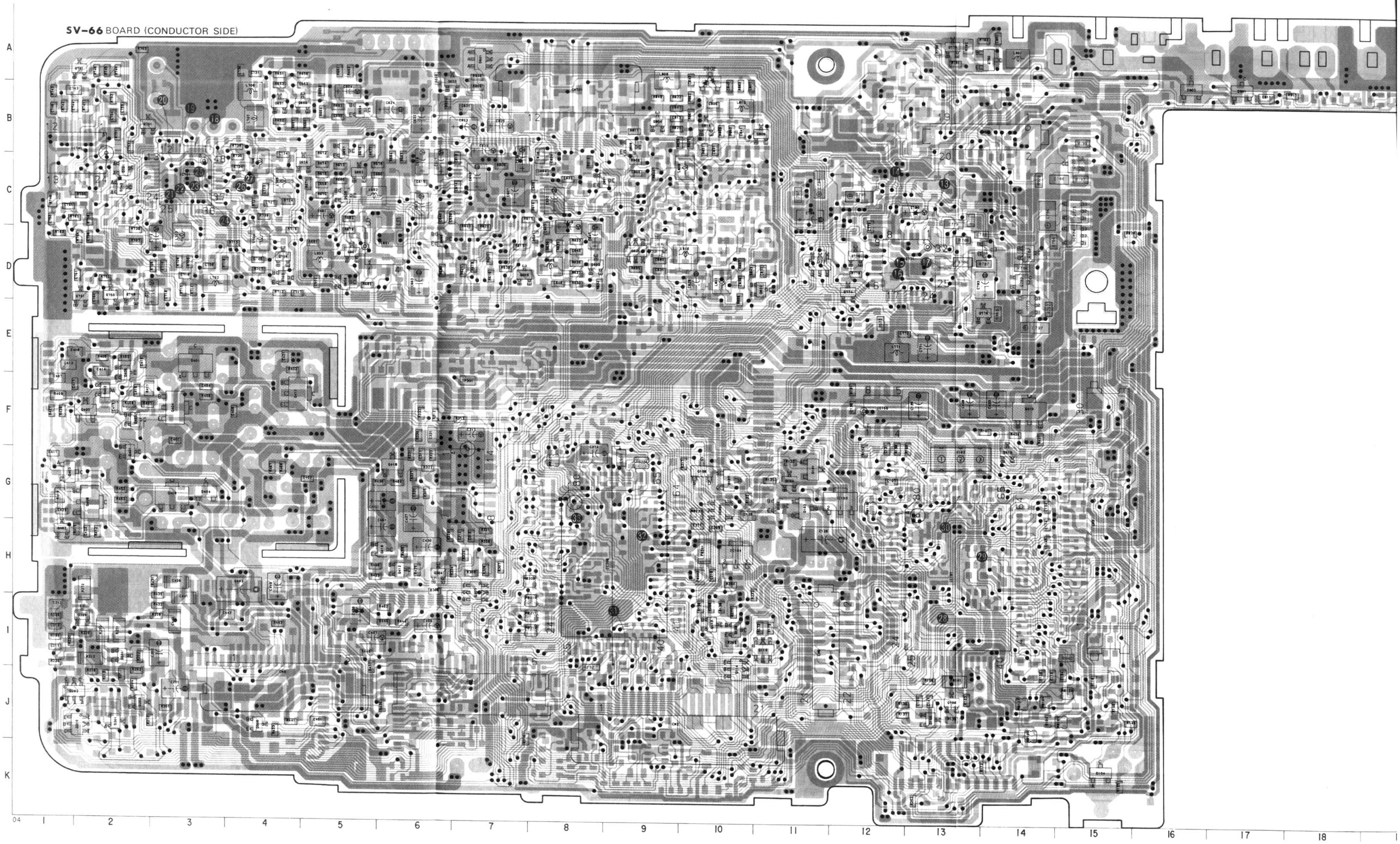
IC773	8-759-234-77	TC4S66F
IC774	8-759-234-77	TC4S66F
IC775	8-759-234-77	TC4S66F

Q208	8-729-820-46	2SB1202FAS
Q209	8-729-905-35	2SC4081-R
Q210	8-729-403-24	XN4210

Q410	8-729-805-25	2SB1121-T-TD
Q410	8-729-805-27	2SB1121-U
Q411	8-729-805-25	2SB1121-T-TD
Q411	8-729-805-27	2SB1121-U
Q412	8-729-905-35	2SC4081-R

SV-66 (SERVO, SYSTEM CONTROL) PRINTED WIRING BOARD

— Ref. No. SV-66 BOARD : 5000 series —


SV-66 BOARD (CONDUCTOR SIDE)
A
B
C
D
E
F
G
H
I
J
K
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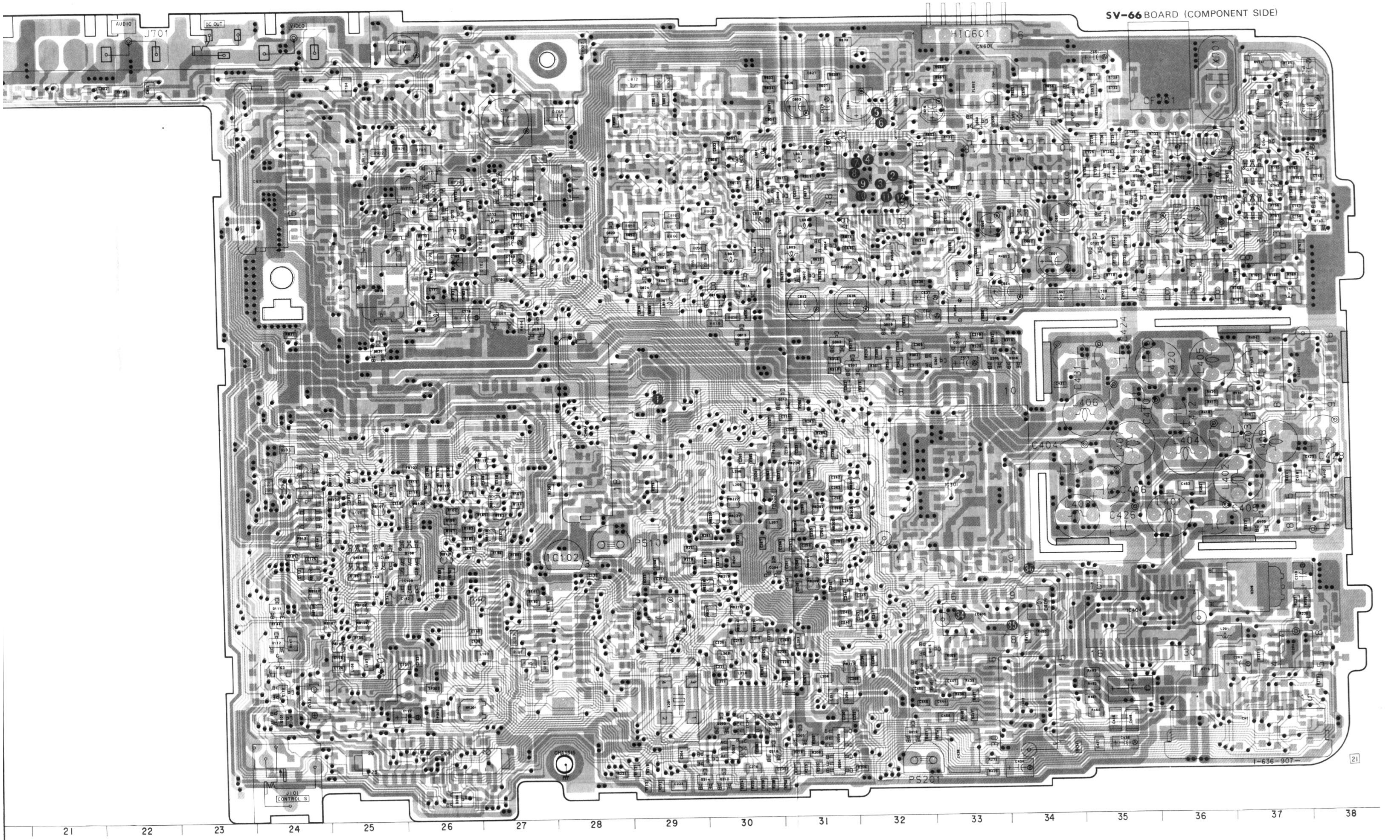
	9-905-18	DTC144EU
	9-920-48	IMH2
	9-905-35	2SC4081-R
	9-141-48	2SB624-BV345
	9-905-61	DTC124EU
	9-905-35	2SC4081-R
	9-905-18	DTC144EU
Q778	8-729-905-18	DTC144EU
Q779	8-729-905-35	2SC4081-R
Q780	8-729-141-48	2SB624-BV345
Q781	8-729-905-18	DTC144EU
Q782	8-729-905-35	2SC4081-R
Q783	8-729-905-18	DTC144EU
Q804	8-729-905-35	2SC4081-R

SV-66 BOARD (COMPONENT SIDE)


AUDIO
J701
DC OUT
VIDEO
HIC601
CN601
CF301
IC102
PS510
PS201
CHASSIS
J101
CONTROL S
L406
L404
L401
C404
C420
C426
C424
1-636-907-
21
22
23
24
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27
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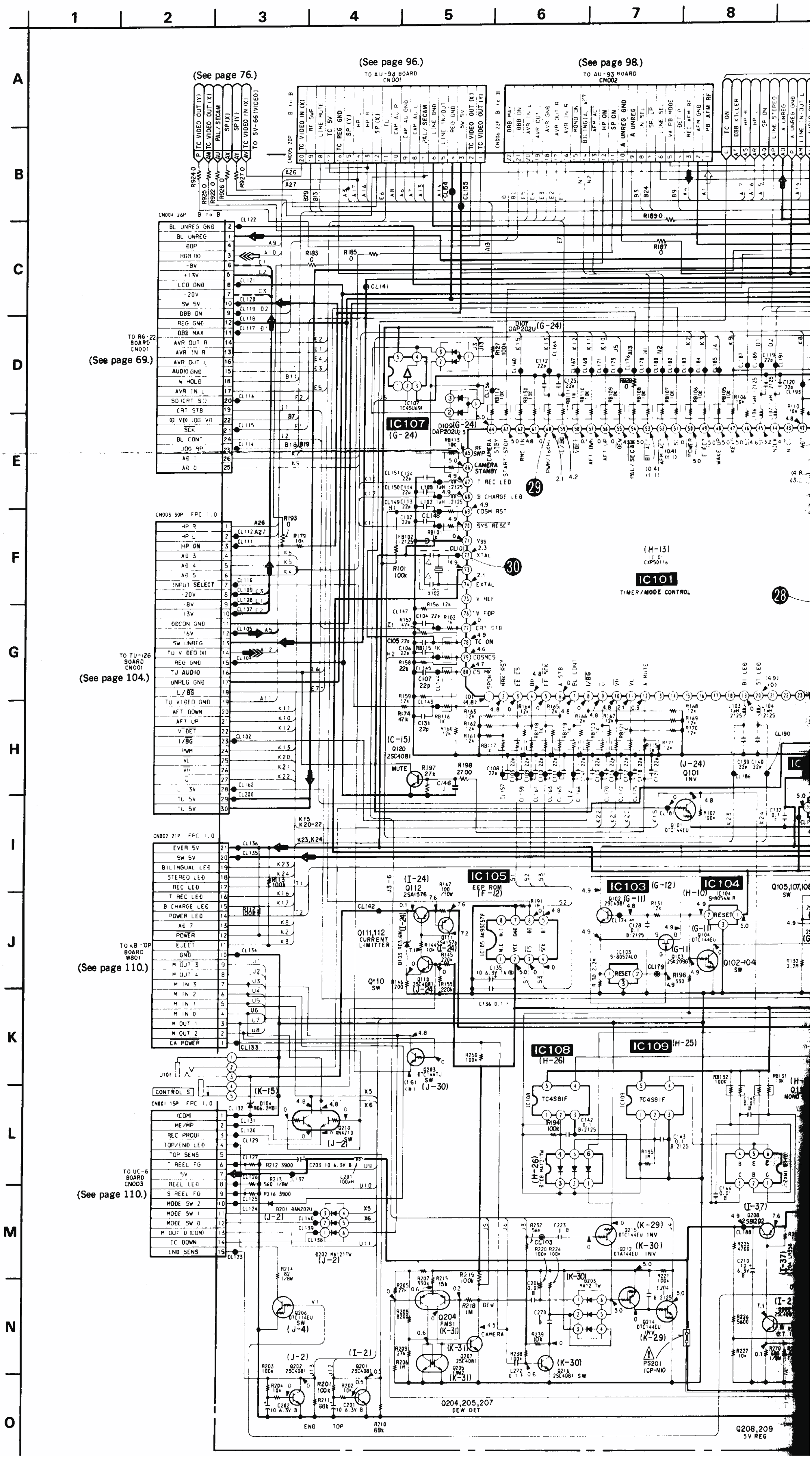
38

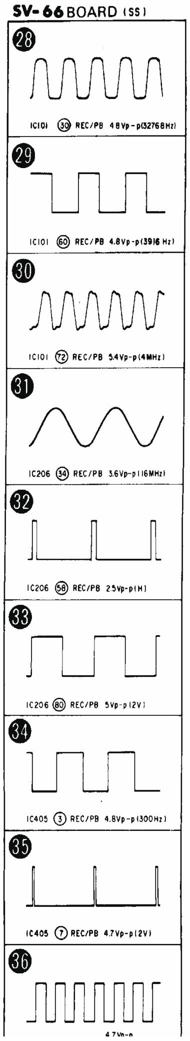
SERVO, SYSTEM CONTROL **SERVO, SYSTEM CONTROL**

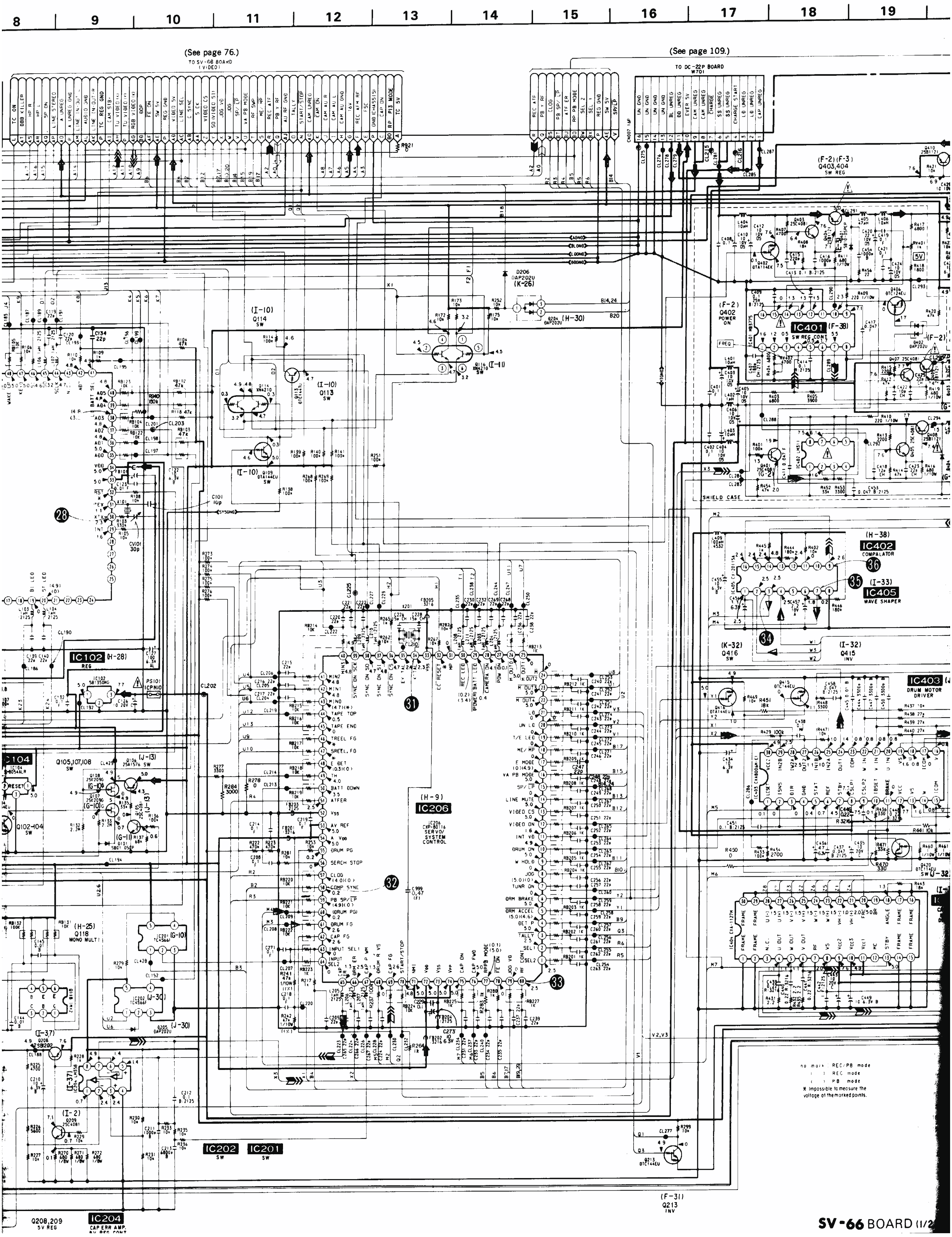
SV-66 (SERVO, SYSTEM CONTROL) SCHEMATIC DIAGRAM

— Ref. No, SV-66 BOARD : 5000 series —


1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
(See page 76.)
(See page 96.)
TO AU-93 BOARD CN001
(See page 98.)
TO AU-93 BOARD CN002
TO RG-22 BOARD CN001
(See page 69.)
TO TU-126 BOARD CN001
(See page 104.)
TO AB-OP BOARD W801
(See page 110.)
TO UC-6 BOARD CN003
(See page 110.)
IC107
(G-24)
IC101
(H-13)
TIMER/MODE CONTROL
IC105
EEP ROM
(F-12)
IC103
(G-12)
IC104
(H-10)
IC108
(H-26)
IC109
(H-25)
Q112
Q111,112
CURRENT LIMITTER
Q110
SW
Q120
2SC4081
MUTE
Q101
INV
Q102-104
SW
Q105,107,108
SW
Q203
SW
Q204
FMS1
Q204,205,207
DEW DET
Q206
SW
Q208,209
5V REG
PS201
ICP-N10
CONTROL S
CAMERA
DEW
END
TOP
28
29
30

SV-66 BOARD (SS)


28
IC101 30 REC/PB 4.8Vp-p(32768Hz)
29
IC101 60 REC/PB 4.8Vp-p(3916 Hz)
30
IC101 72 REC/PB 5.4Vp-p(4MHz)
31
IC206 34 REC/PB 3.6Vp-p(16MHz)
32
IC206 58 REC/PB 2.5Vp-p(H)
33
IC206 80 REC/PB 5Vp-p(2V)
34
IC405 3 REC/PB 4.8Vp-p(300Hz)
35
IC405 7 REC/PB 4.7Vp-p(2V)
36
4.7Vp-p


8
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11
12
13
14
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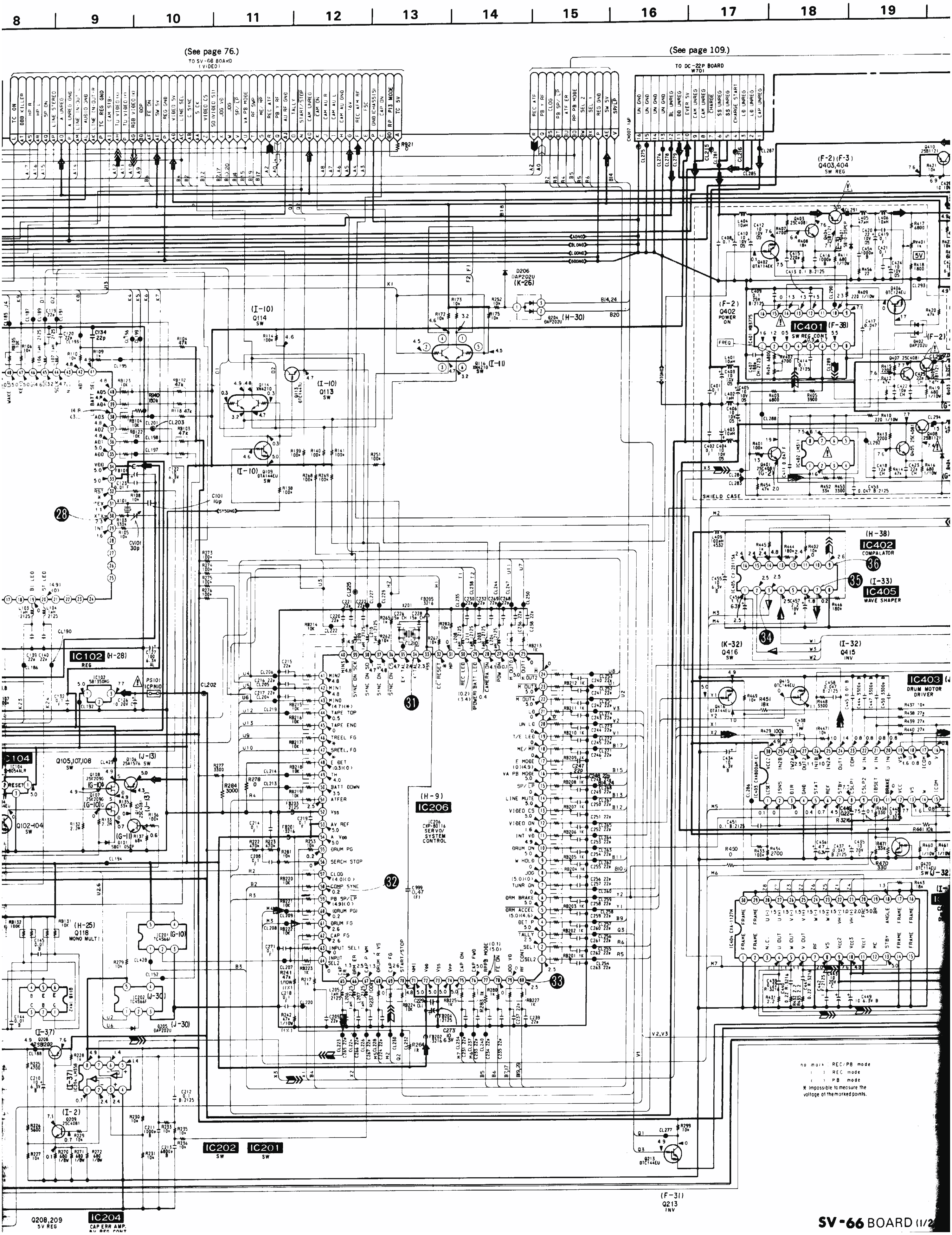
16
17
18
19
(See page 76.)
TO SV-66 BOARD (VIDEO)
(See page 109.)
TO DC-22P BOARD W701
(F-2)(F-3) Q403,404 SW REG
(F-2) Q402 POWER ON
IC401 (F-38) SW REG CONT
SHIELD CASE
(H-38) IC402 COMPALATOR
(I-33) IC405 WAVE SHAPER
(K-32) Q416 SW
(I-32) Q415 INV
IC403 DRUM MOTOR DRIVER
(I-10) Q114 SW
(I-10) Q113 SW
(I-11) Q116 SW
(I-10) Q109 SW
D206 DAP202U (K-26)
IC102 (H-28) REG
(H-9) IC206 SERVO/SYSTEM CONTROL
Q105,107,108 SW
Q102-104 SW
(H-25) Q118 MONO MULTI
Q205 (J-30)
(I-2) Q209
IC202 SW
IC201 SW
(F-31) Q213 INV
Q208,209 5V REG
IC204 CAP ERR AMP. 8V REG CONT
no mark : REC/PB mode
( ) REC mode
( ) PB mode
✱ Impossible to measure the voltage of the marked points.

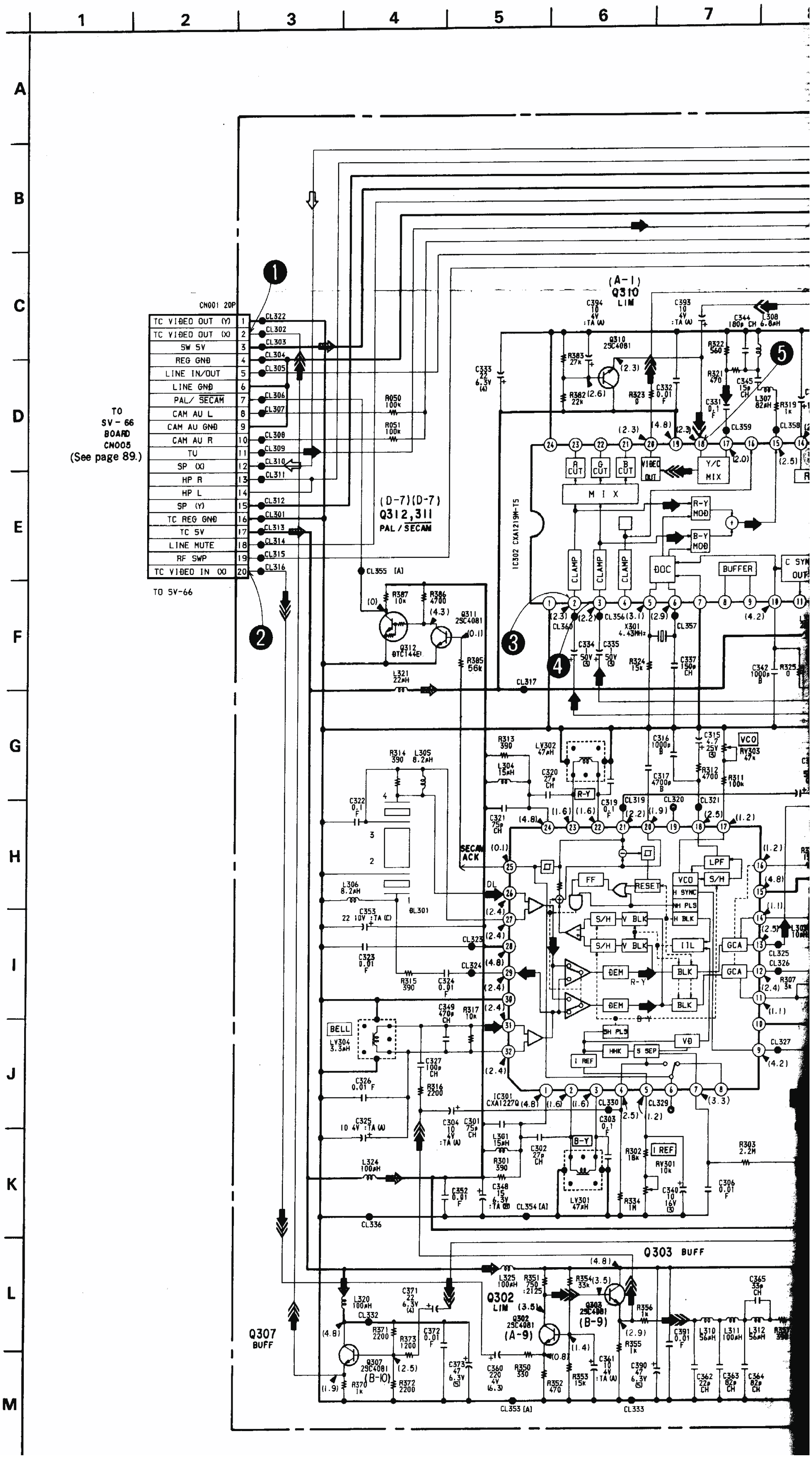
SV-66 BOARD (1/2


8
9
10
11
12
13
14
15
16
17
18
19
(See page 76.)
TO SV-66 BOARD (VIDEO)
(See page 109.)
TO DC-22P BOARD W701
UN GND
BL UNREG
DD UNREG
EVER 5V
CAM UNREG
CHARGE
SS UNREG
CHARGE START
LD UNREG
CAP UNREG
TC ON
DBB KILLER
HP R
HP L
SP ON
LINE STEREO
A UNREG
CAM STB
TU VIDEO
RGB VIDEO
BDP
FE ON
SW 5V
REG GND
VIDEO 5V
LINE SEL
C SYNC
S.CK
VIDEO CS
JOG
SP/LP
VA PB MODE
RF SWP
ME/MP
REC ATF
PB RF
AU RF GND
START/STOP
CAM ON
FSC
CAP ON
RP P13 MODE
TC 5V
REC ATF
PB Y RF
CLOG
PB SP/LP
ATF ER
RP PB MODE
SEL 1
SEL 2
SW 5V
SP/LP
(F-2)(F-3) Q403,404 SW REG
(F-2) Q402 POWER ON
IC401 (F-38) SW REG CONT
SHIELD CASE
(H-38) IC402 COMPALATOR
(I-33) IC405 WAVE SHAPER
(K-32) Q416 SW
(I-32) Q415 INV
IC403 DRUM MOTOR DRIVER
IC404 CXA1127M
(I-10) Q114 SW
(I-10) Q113 SW
(I-10) Q109 DTA144EU SW
Q116 XN4210 (I-11) SW
D206 DAP202U (K-26)
D204 DAP202U (H-30)
IC102 (H-28) REG
Q105,107,108 SW
Q106 (J-13) 2SA1576 SW
Q102-104 SW
(H-25) Q118 MONO MULTI
IC202 (J-30)
IC203 (G-10)
Q205 DAP202U (J-30)
(I-37) Q208 2SB1202
(I-2) Q209 2SC4081
(H-9) IC206 CXP-80116 SERVO/SYSTEM CONTROL
IC202 SW
IC201 SW
Q208,209 5V REG
IC204 CAP ERR AMP. 5V REG CONT
(F-31) Q213 INV
(F-2) Q407 2SC4081
Q420 DTC144EU SW (J-32)
28
31
32
33
34
35
36
no mark : REC/PB mode
[ ] : REC mode
( ) : PB mode
* Impossible to measure the voltage at the marked points.

SV-66 BOARD (1/2

AU-93 (AFM, SECAM-PAL CONVERSION) SCHEMATIC DIAGRAM

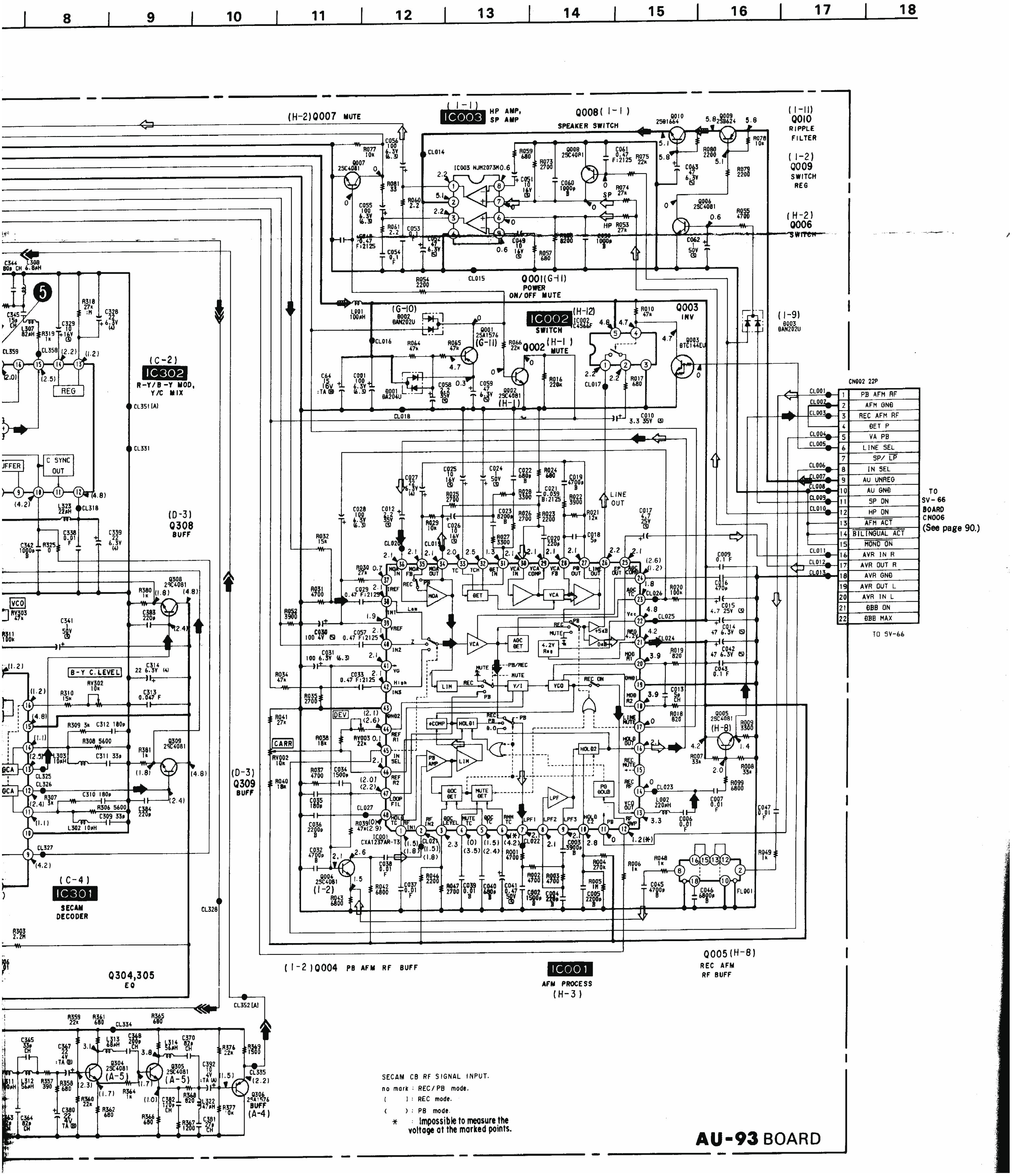
— Ref. No, AU-93 BOARD : 7000 series —


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
K
L
M
CN001 20P
TC VIDEO OUT (Y) 1
TC VIDEO OUT (X) 2
SW 5V 3
REG GND 4
LINE IN/OUT 5
LINE GND 6
PAL/ SECAM 7
CAM AU L 8
CAM AU GND 9
CAM AU R 10
TU 11
SP (X) 12
HP R 13
HP L 14
SP (Y) 15
TC REG GND 16
TC 5V 17
LINE MUTE 18
RF SWP 19
TC VIDEO IN (X) 20
CL322
CL302
CL303
CL304
CL305
CL306
CL307
CL308
CL309
CL310
CL311
CL312
CL301
CL313
CL314
CL315
CL316
TO SV-66 BOARD CN005 (See page 89.)
TO SV-66
(A-1) Q310 LIM
Q310 2SC4081
(D-7)(D-7) Q312,311 PAL/SECAM
Q311 2SC4081
Q312 DTC144EI
IC302 CXA1219M-T5
R CUT
G CUT
B CUT
VIDEO OUT
Y/C MIX
M I X
R-Y MOD
B-Y MOD
CLAMP
DOC
BUFFER
C SYNC OUT
X301 4.43MHz
VCO
RV303
SECAM ACK
FF
RESET
VCO
S/H
LPF
H SYNC
NH PLS
H BLK
S/H
V BLK
IIL
GCA
DEM
BLK
VD
IREF
HHK
S SEP
5H PLS
IC301 CXA1227Q
BELL
LV304 3.3μH
B-Y
R-Y
LV301 47μH
LV302 47μH
I REF
RV301 10k
Q303 BUFF
Q302 LIM
Q302 2SC4081 (A-9)
Q303 2SC4081 (B-9)
Q307 BUFF
Q307 2SC4081 (B-10)
CL317
CL336
CL353 [A]
CL333
CL355 [A]
CL354 [A]

- Reference voltage value
  The following two types of extension harnes are required to measure the voltage of the AU-93 board
  - 20P extension harness (J-6082-111-A)
  - 22P extension harness (J-6082-112-A)

• Signal path

	AUDIO Signal
REC	➡
PB	⇨


8
9
10
11
12
13
14
15
16
17
18
(H-2)Q007 MUTE
(I-1) IC003 HP AMP, SP AMP
Q008(I-1) SPEAKER SWITCH
(I-11) Q010 RIPPLE FILTER
(I-2) Q009 SWITCH REG
(H-2) Q006 SWITCH
Q001(G-11) POWER ON/OFF MUTE
(G-10) B002 BAN202U
IC002 (H-12) SWITCH
Q002 (H-1) MUTE
Q003 INV
(I-9) B003 BAN202U
(C-2) IC302 R-Y/B-Y MOD, Y/C MIX
REG
C SYNC OUT
(D-3) Q308 BUFF
(D-3) Q309 BUFF
VCO
B-Y C.LEVEL
(C-4) IC301 SECAM DECODER
Q304,305 EQ
LINE OUT
CN002 22P
1 PB AFM RF
2 AFM GND
3 REC AFM RF
4 DET P
5 VA PB
6 LINE SEL
7 SP/ LP
8 IN SEL
9 AU UNREG
10 AU GND
11 SP ON
12 HP ON
13 AFM ACT
14 BILINGUAL ACT
15 MONO ON
16 AVR IN R
17 AVR OUT R
18 AVR GND
19 AVR OUT L
20 AVR IN L
21 BBB ON
22 BBB MAX
TO SV-66 BOARD CN006 (See page 90.)
TO SV-66
IC001 CXA1237AR-T3
(I-2)Q004 PB AFM RF BUFF
IC001 AFM PROCESS (H-3)
Q005(H-8) REC AFM RF BUFF
Q304 2SC4081 (A-5)
Q305 2SC4081 (A-5)
Q306 2SA1576 BUFF (A-4)
FL001

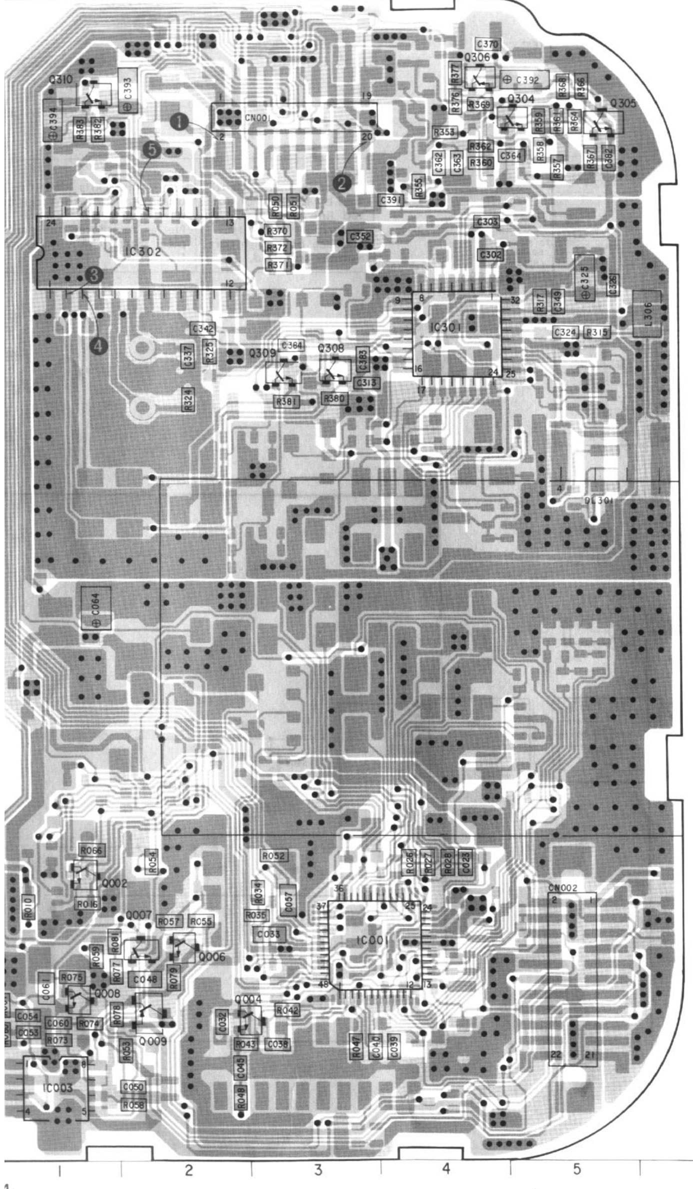
SECAM CB RF SIGNAL INPUT.
no mark : REC/PB mode.
( ) : REC mode.
( ) : PB mode.
* : Impossible to measure the voltage at the marked points.

AU-93 BOARD

93 (AFM, SECAM-PAL CONVERSION) PRINTED WIRING BOARD

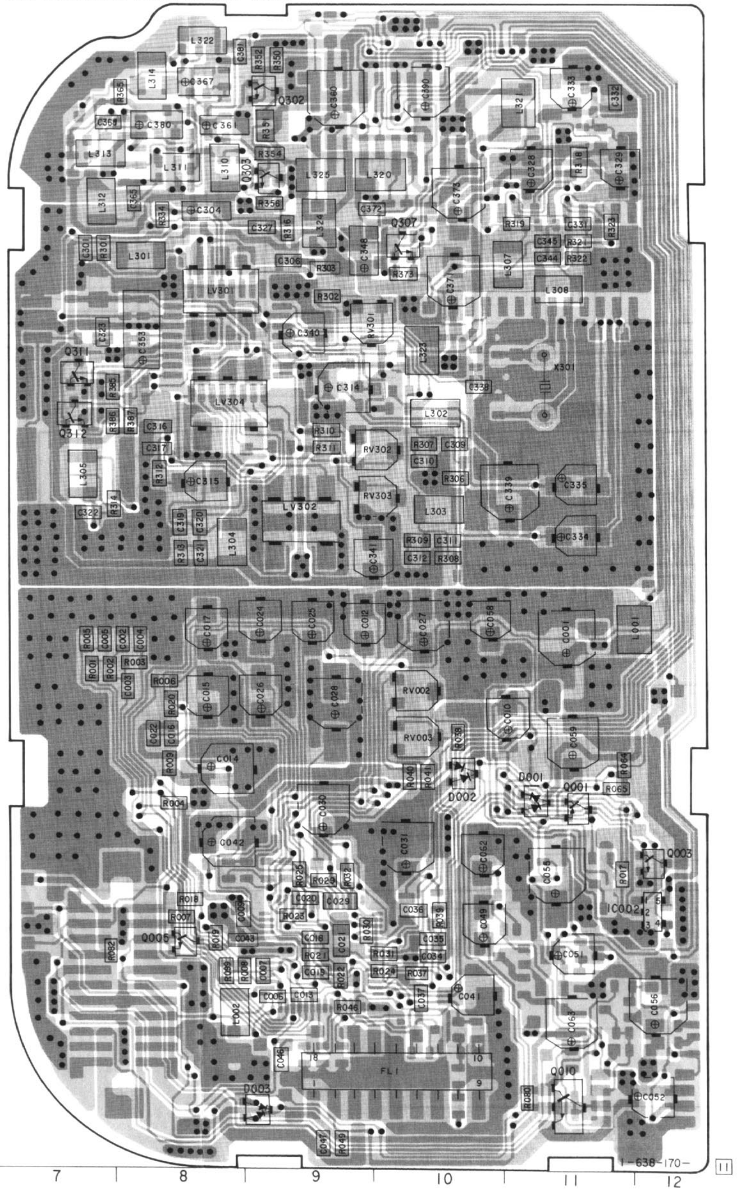
ef. No, AU-93 BOARD : 7000 series —

-93 BOARD (CONDUCTOR SIDE)



C370
Q306
C392
Q304
Q305
Q310
C393
C394
CN001
IC302
IC301
Q309
Q308
DL301
C064
Q002
Q007
Q006
Q008
Q009
Q004
IC001
CN002
IC003
1
2
3
4
5
6

AU-93 BOARD (COMPONENT SIDE)



L322
L314
Q302
L313
L311
L310
Q303
L325
L320
L312
L301
LV301
Q307
L308
RV301
Q311
Q312
LV304
L302
RV302
RV303
L305
LV302
L303
L304
X301
L001
RV002
RV003
D001
Q001
D002
Q003
IC002
Q005
FL1
D003
Q010
7
8
9
10
11
12
1-638-170-
11

< DIODE >

D001	8-719-941-23	DA204U
D002	8-719-941-86	DAN202U
D003	8-719-941-86	DAN202U

< IC >

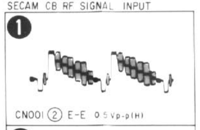
IC001	8-752-033-01	CXA1237AR
IC002	8-759-234-77	TC4S66F
IC003	8-759-701-02	NJM2073M
IC301	8-752-035-00	CXA1227Q
IC302	8-752-034-04	CXA1219M

< TRANSISTOR >

Q001	8-729-905-23	2SA1576-R
Q002	8-729-905-35	2SC4081-R
Q003	8-729-905-18	DTC144EU
Q004	8-729-905-35	2SC4081-R
Q005	8-729-905-35	2SC4081-R
Q006	8-729-905-35	2SC4081-R
Q007	8-729-905-35	2SC4081-R
Q008	8-729-905-35	2SC4081-R
Q009	8-729-141-48	2SB624-BV345
Q010	8-729-920-85	2SD1664-QR
Q302	8-729-905-35	2SC4081-R
Q303	8-729-905-35	2SC4081-R
Q304	8-729-905-35	2SC4081-R
Q305	8-729-905-35	2SC4081-R
Q306	8-729-905-23	2SA1576-R
Q307	8-729-905-35	2SC4081-R
Q308	8-729-905-35	2SC4081-R
Q309	8-729-905-35	2SC4081-R
Q310	8-729-905-35	2SC4081-R
Q311	8-729-905-35	2SC4081-R
Q312	8-729-905-18	DTC144EU

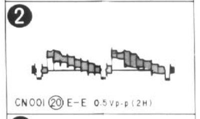
AU-93 BOARD
SECAM CB RF SIGNAL INPUT

❶



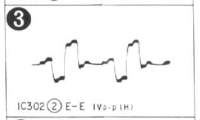
CN001 ② E-E 0.5Vp-p(H)

❷



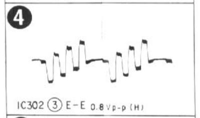
CN001 ⑳ E-E 0.5Vp-p(2H)

❸



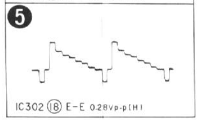
IC302 ② E-E 1Vp-p(H)

❹



IC302 ③ E-E 0.8Vp-p(H)

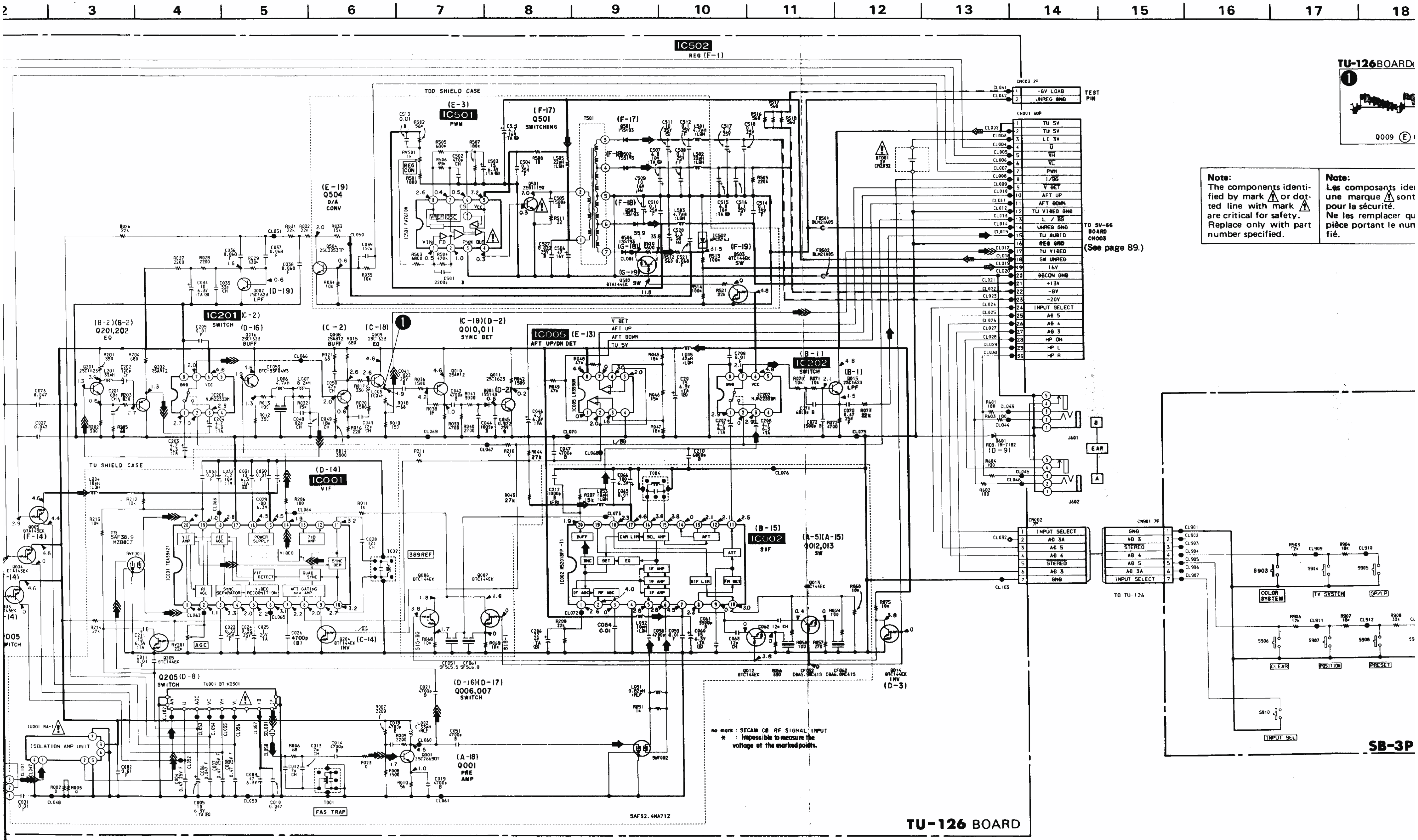
❺



IC302 ⑱ E-E 0.28Vp-p(H)

TU-126 (TUNER, VIF, SIF, DC/DC CONVERTER) SCHEMATIC DIAGRAM

-126 BOARDS : 6000 series —


2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
IC502
REG (F-1)
TOD SHIELD CASE
(E-3)
IC501
PWM
(F-17)
Q501
SWITCHING
(F-17)
(F-18)
(F-19)
(G-18)
(G-19)
Q502
BTA144EK SW
(E-19)
Q504
D/A
CONV
(B-2)(B-2)
Q201,202
EQ
IC201 (C-2)
SWITCH
(D-16)
(C-2)
(C-18)
(C-18)(D-2)
Q010,011
SYNC DET
IC005 (E-13)
AFT UP/DN DET
V DET
AFT UP
AFT DOWN
TU 5V
(B-1)
IC202
SWITCH
(B-1)
Q015
2SC1623
LPF
TU SHIELD CASE
(D-14)
IC001
VIF
(F-14)
AGC
(C-14)
INV
389REF
(B-15)
IC002
SIF
(A-5)(A-15)
Q012,013
SW
(D-3)
Q205 (D-8)
SWITCH
TU001 BT-KG301
TU001 RA-1
ISOLATION AMP UNIT
(D-16)(D-17)
Q006,007
SWITCH
(A-18)
Q001
PRE
AMP
FAS TRAP
SWF002
CN003 2P
CL041
CL042
1 -8V LOAD
2 UNREG GND
TEST PIN
CN001 30P
1 TU 5V
2 TU 5V
3 LI 3V
4 U
5 VH
6 VL
7 PWM
8 I/BG
9 V DET
10 AFT UP
11 AFT DOWN
12 TU VIDEO GND
13 L / BG
14 UNREG GND
15 TU AUDIO
16 REG GND
17 TU VIDEO
18 SW UNREG
19 16V
20 DDCON GND
21 +13V
22 -8V
23 -20V
24 INPUT SELECT
25 AD 5
26 AD 4
27 AD 3
28 HP ON
29 HP L
30 HP R
TO SV-66
BOARD
CN003
(See page 89.)
J401
J402
B
EAR
A
CN002
7P
1 INPUT SELECT
2 AD 3A
3 AD 5
4 AD 4
5 STEREO
6 AD 3
7 GND
CL032
CL103
CN901 7P
GND 1
AD 3 2
STEREO 3
AD 4 4
AD 5 5
AD 3A 6
INPUT SELECT 7
TO TU-126
S903
S904
S905
COLOR SYSTEM
TV SYSTEM
SP/LP
S906
S907
S908
CLEAR
POSITION
PRESET
S910
INPUT SEL
SB-3P
TU-126 BOARD
TU-126BOARD
Q009 (E)
SAF32.4MA71Z

no mark : SECAM CB RF SIGNAL INPUT
* : Impossible to measure the voltage at the marked points.

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants ide
une marque ⚠ sont
pour la sécurité.
Ne les remplacer qu
pièce portant le num
fié.

SB-3P (FUNCTION SW), TU-126 (TUNER, VIF, SIF, DC/DC CONVERTER) PRINTED WIRING BOARDS

— Ref. No, SB-3P and TU-126 BOARDS : 6000 series —

< DIODE >

D001	8-719-400-18	MA152WK
D501	8-719-400-18	MA152WK
D502	8-719-400-18	MA152WK
D503	8-719-400-18	MA152WK
D504	8-719-400-18	MA152WK
D601	8-719-106-44	RD9. 1M-B2

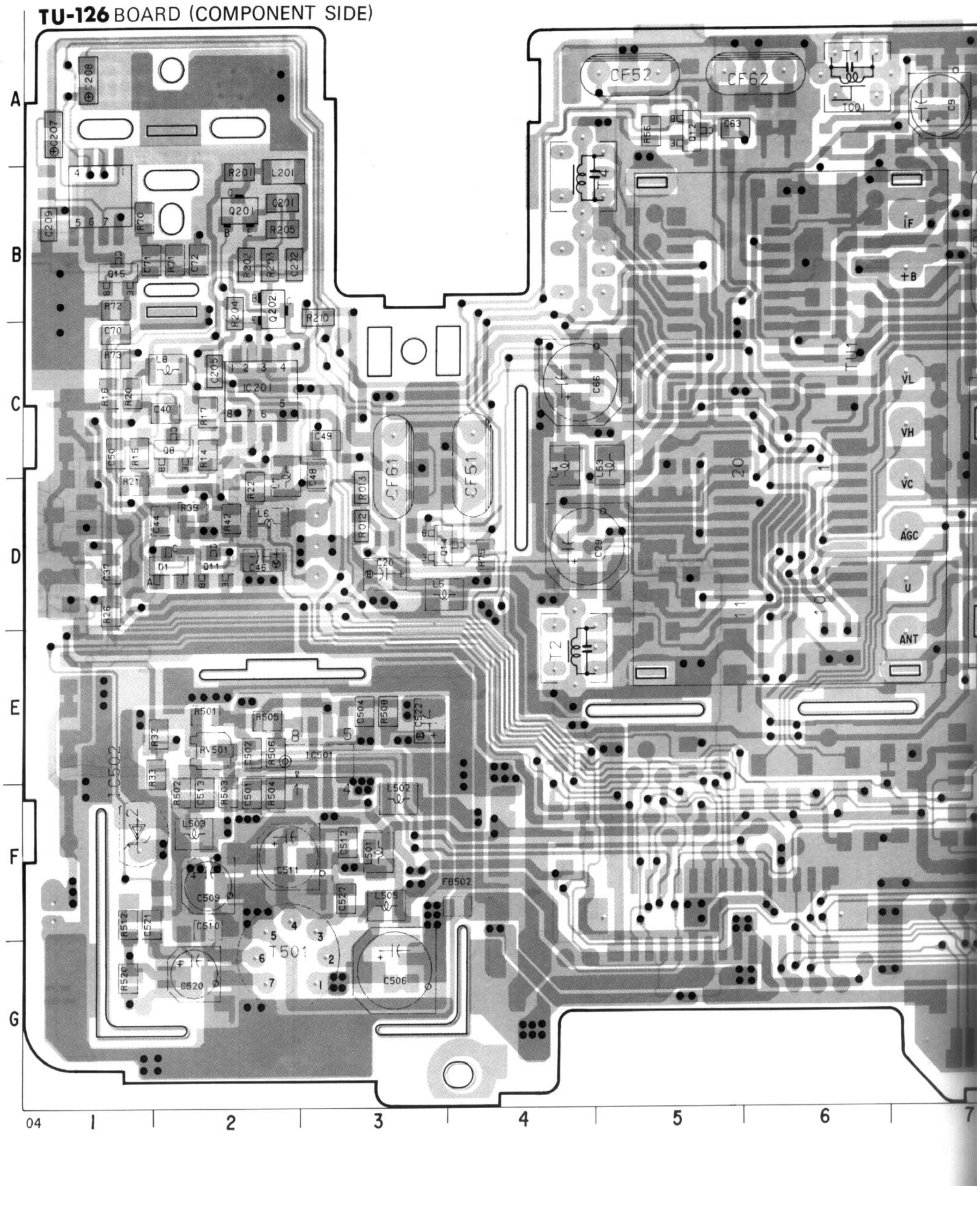
< IC >

IC001	8-759-504-58	TDA3842T
IC002	8-759-634-94	M52018FP
IC005	8-759-998-92	LM393D
IC201	8-759-710-86	NJM2233BM
IC202	8-759-710-86	NJM2233BM
IC501	8-759-979-50	FA7610N
IC502	8-759-157-40	uPC574J

< TRANSISTOR >

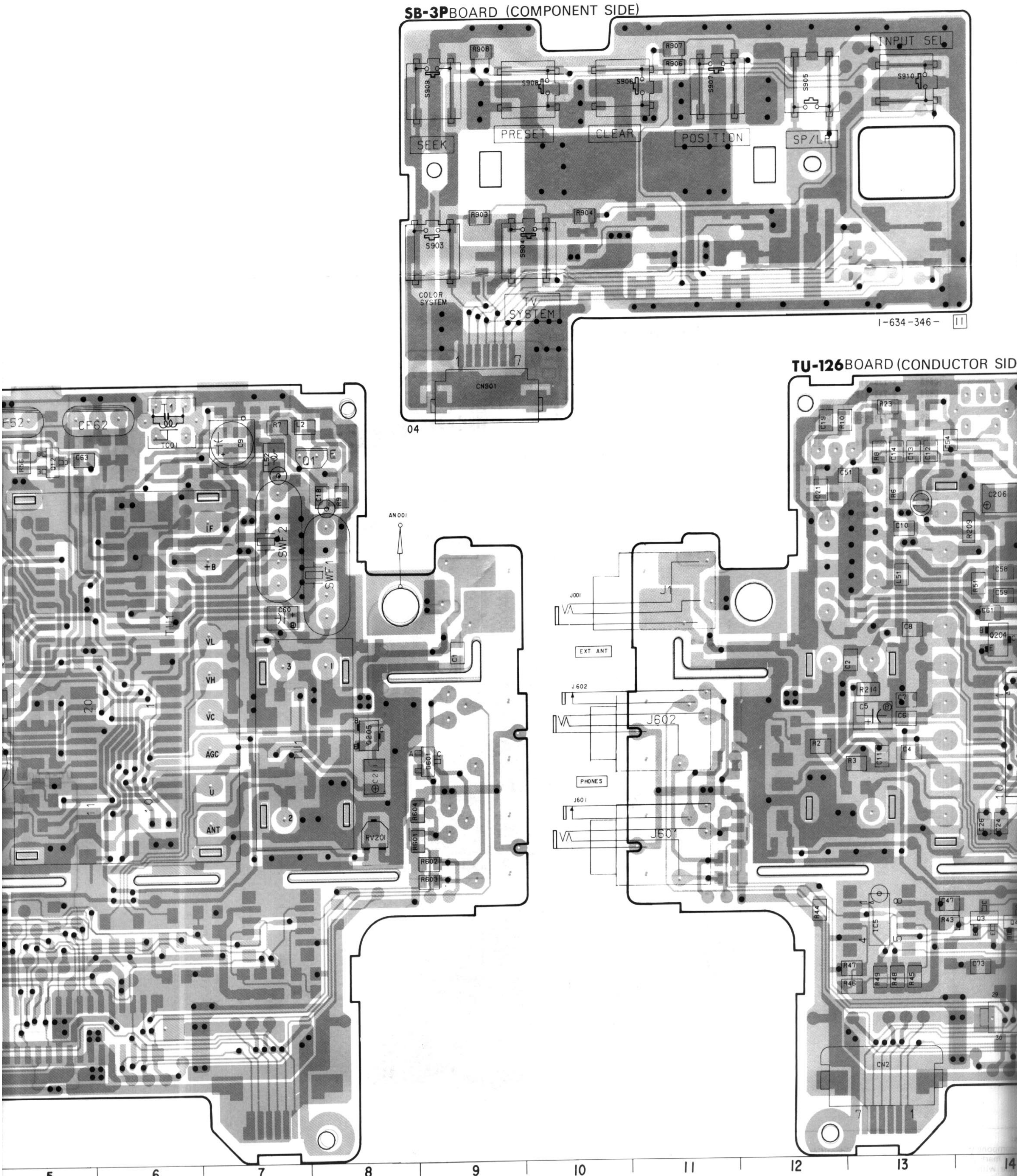
Q001	8-729-230-XX	2SC2669-OY
Q002	8-729-100-66	2SC1623
Q003	8-729-901-47	DTA143EK
Q004	8-729-901-47	DTA143EK
Q005	8-729-901-47	DTA143EK
Q006	8-729-901-01	DTC144EK
Q007	8-729-901-01	DTC144EK
Q008	8-729-216-22	2SA1162
Q009	8-729-100-66	2SC1623
Q010	8-729-216-22	2SA1162
Q011	8-729-100-66	2SC1623
Q012	8-729-901-01	DTC144EK
Q013	8-729-901-01	DTC144EK
Q014	8-729-901-01	DTC144EK
Q015	8-729-100-66	2SC1623
Q016	8-729-100-66	2SC1623
Q201	8-729-100-66	2SC1623
Q202	8-729-216-22	2SA1162
Q204	8-729-901-01	DTC144EK
Q501	8-729-421-15	2SD1119-Q
Q502	8-729-901-06	DTA144EK
Q503	8-729-901-01	DTC144EK
Q504	8-729-601-58	2SC3053-C

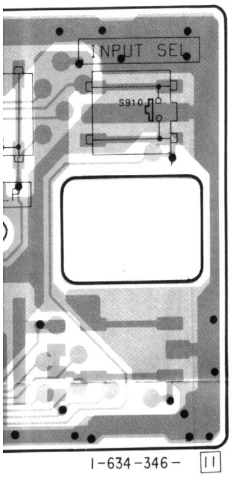
TU-126 BOARD (COMPONENT SIDE)


A
B
C
D
E
F
G
04
1
2
3
4
5
6
7
C208
C207
C209
R201
L201
Q201
C201
R205
R202
R203
C212
R204
Q202
R210
Q15
R72
C70
R73
L8
C205
IC201
R16
R20
C40
R17
C49
R50
R15
Q8
R14
R22
C48
R013
R012
R27
R39
R42
L6
C44
C37
D1
Q11
C46
C26
L5
R26
CF61
CF51
CF52
CF62
T1
TC01
C9
R56
D12
C63
T4
IF
+B
TU1
VL
VH
VC
AGC
U
ANT
C85
L4
L53
C89
T2
20
10
11
1
R501
R505
C504
R508
C227
R32
RV501
R506
IC501
R33
R502
C513
C501
R504
R503
L502
IC502
L503
C512
C511
L501
FB502
C509
C510
L505
C521
R512
C521
T501
C506
C520
R520

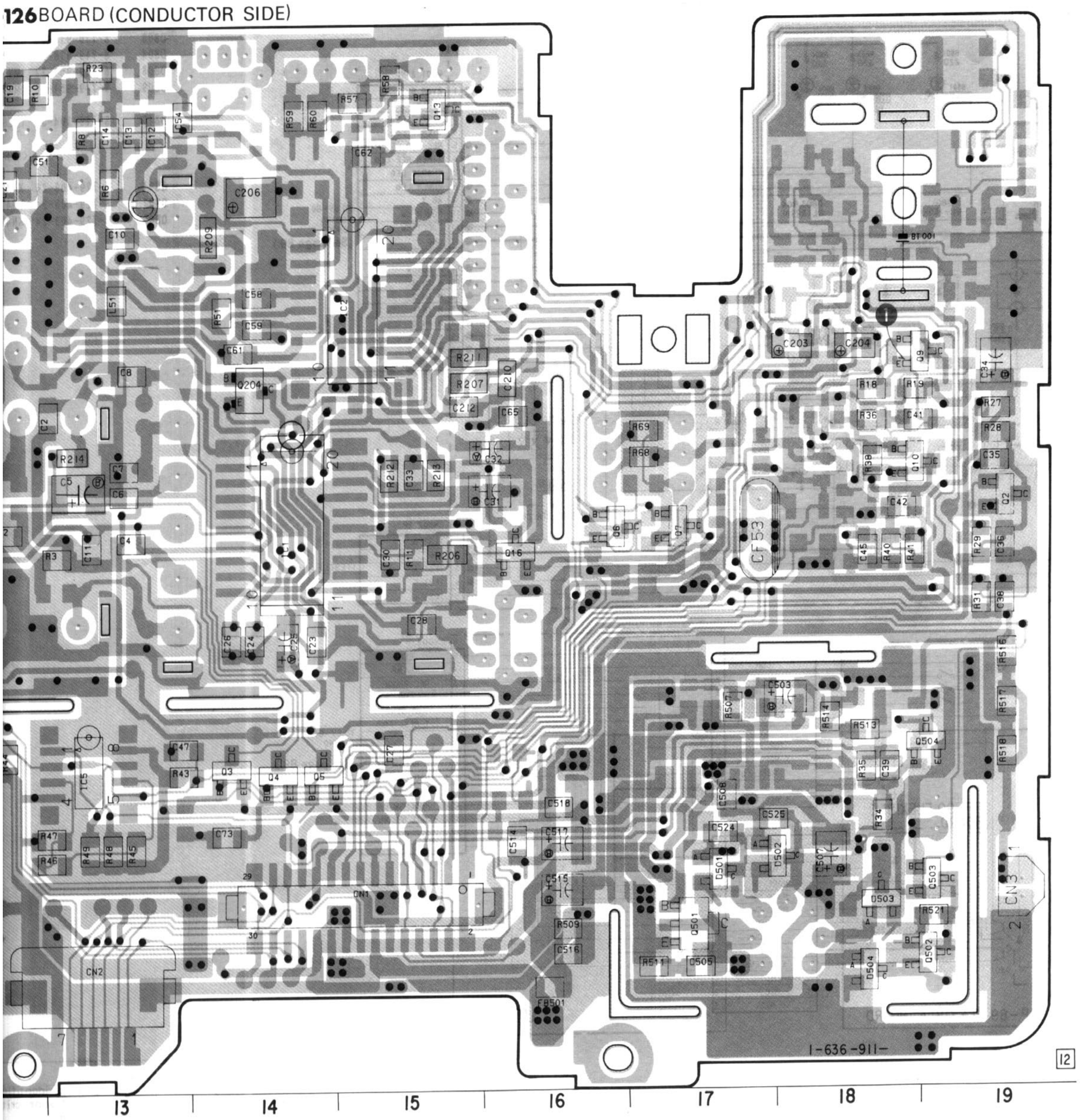
SB-3PBOARD (COMPONENT SIDE)

TU-126BOARD (CONDUCTOR SID


R908
R907
R906
S909
S908
S906
S907
S905
S910
INPUT SEL
SEEK
PRESET
CLEAR
POSITION
SP/LP
R903
R904
S903
S904
COLOR SYSTEM
TV SYSTEM
1
7
CN901
1-634-346- 11
04
CF52
CF62
TC01
C63
R56
D12
R7
L2
C9
L52
Q1
E
C18
R9
IF
+B
SWF 2
SWF 1
C60
VL
VH
VC
AGC
U
ANT
20
3
2
Q205
C211
RV201
AN001
D601
R604
R601
R602
R603
J001
EXT ANT
J602
PHONES
J601
J1
J602
J601
R23
C19
R10
R8
C14
C13
C12
C54
C51
C21
R6
C206
C10
R209
L51
R51
C58
C59
C61
Q204
C8
C2
R214
C5
C7
C6
R2
R3
C11
C4
C26
C24
R44
IC5
C47
R43
Q3
R47
R46
R49
R48
R45
C73
CN2
5
6
7
8
9
10
11
12
13
14

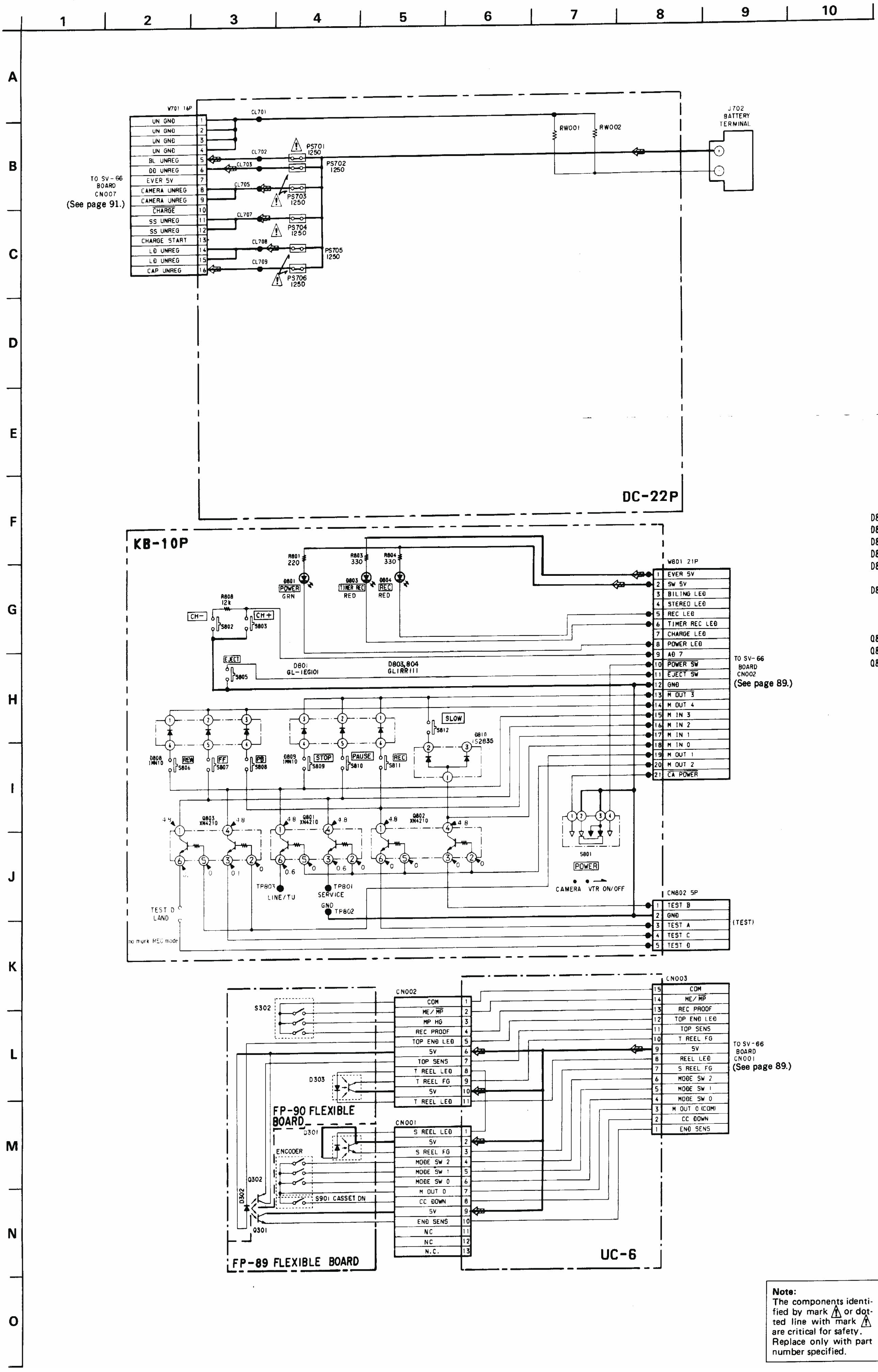

INPUT SEL
S910
1-634-346-
11

126BOARD (CONDUCTOR SIDE)


R23
C19
R10
R8
C14
C13
C12
C54
C51
R6
C206
R203
C10
R59
R60
R57
R58
Q13
C62
IC2
20
10
11
C58
C59
R51
C61
Q204
C51
C8
C2
R214
C5
C6
C3
R3
C11
C4
R211
R207
C212
C20
C65
C32
C31
R212
C33
R213
C30
R11
R206
Q16
C28
C26
C24
C25
C23
R69
R68
Q6
Q7
CF53
C203
C204
BT001
Q9
R18
R19
R36
C41
R38
Q10
C42
C45
R40
R41
C34
R27
R28
C35
Q2
R29
C36
R31
C38
R516
R517
R518
C503
R507
R514
R513
Q504
R35
C39
R34
C508
C525
C524
Q501
Q502
C507
D503
R521
C503
Q502
D504
IC5
C47
R43
Q3
Q4
Q5
C27
R47
R46
R49
R48
R45
C73
C518
C514
C517
C515
CN1
29
30
1
2
R509
C516
R511
C505
Q501
CN2
7
1
FB501
CN3
1-636-911-
12
13
14
15
16
17
18
19

DC-22P (BATT IN), KB-10P (FUNCTION SW), UC-6 (MD RELAY), FP-89 and FP-90 (MECHA DECK) PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAM

— Ref. No, DC-22P, KB-10P and UC-6 BOARDS : 4000 series, FP-89 and FP-90 BOARDS : 8000 series —


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
W701 16P
UN GND
UN GND
UN GND
UN GND
BL UNREG
DD UNREG
EVER 5V
CAMERA UNREG
CAMERA UNREG
CHARGE
SS UNREG
SS UNREG
CHARGE START
LD UNREG
LD UNREG
CAP UNREG
TO SV-66 BOARD CN007
(See page 91.)
CL701
CL702
CL703
CL705
CL707
CL708
CL709
PS701 1250
PS702 1250
PS703 1250
PS704 1250
PS705 1250
PS706 1250
RW001
RW002
J702 BATTERY TERMINAL
DC-22P
KB-10P
R801 220
R803 330
R804 330
D801 POWER GRN
D803 TIMER REC RED
D804 REC RED
R808 12k
CH−
CH+
S802
S803
EJECT
S805
D801 GL-1EG101
D803,804 GL1RR111
W801 21P
EVER 5V
SW 5V
BILING LED
STEREO LED
REC LED
TIMER REC LED
CHARGE LED
POWER LED
AD 7
POWER SW
EJECT SW
GND
M OUT 3
M OUT 4
M IN 3
M IN 2
M IN 1
M IN 0
M OUT 1
M OUT 2
CA POWER
TO SV-66 BOARD CN002
(See page 89.)
SLOW
S812
D810 1S2835
D808 1MN10
REW
S806
FF
S807
PB
S808
D809 1MN10
STOP
S809
PAUSE
S810
REC
S811
Q803 XN4210
Q801 XN4210
Q802 XN4210
4.8
0.1
0.6
0
TP803 LINE/TU
TP801 SERVICE
GND TP802
TEST D LAND
no mark REC mode
S801
POWER
CAMERA VTR ON/OFF
CN802 5P
TEST B
GND
TEST A
TEST C
TEST D
(TEST)
S302
CN002
COM
ME/MP
MP HG
REC PROOF
TOP END LED
5V
TOP SENS
T REEL LED
T REEL FG
5V
T REEL LED
D303
FP-90 FLEXIBLE BOARD
D301
CN001
S REEL LED
5V
S REEL FG
MODE SW 2
MODE SW 1
MODE SW 0
M OUT 0
CC DOWN
5V
END SENS
NC
NC
N.C.
ENCODER
Q302
D302
S901 CASSET DN
Q301
FP-89 FLEXIBLE BOARD
CN003
COM
ME/MP
REC PROOF
TOP END LED
TOP SENS
T REEL FG
5V
REEL LED
S REEL FG
MODE SW 2
MODE SW 1
MODE SW 0
M OUT 0 (COM)
CC DOWN
END SENS
TO SV-66 BOARD CN001
(See page 89.)
UC-6

<

D801	8-719-970-40	Gl
D803	8-719-918-65	Gl
D804	8-719-918-65	Gl
D808	8-719-951-22	I
D809	8-719-951-22	I
D810	8-719-104-34	1

<

Q801	8-729-403-24	X
Q802	8-729-403-24	X
Q803	8-729-403-24	X

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants
une marque ⚠
pour la sécurité.
Ne les remplacer
pièce portant le
fié.

< DIODE >

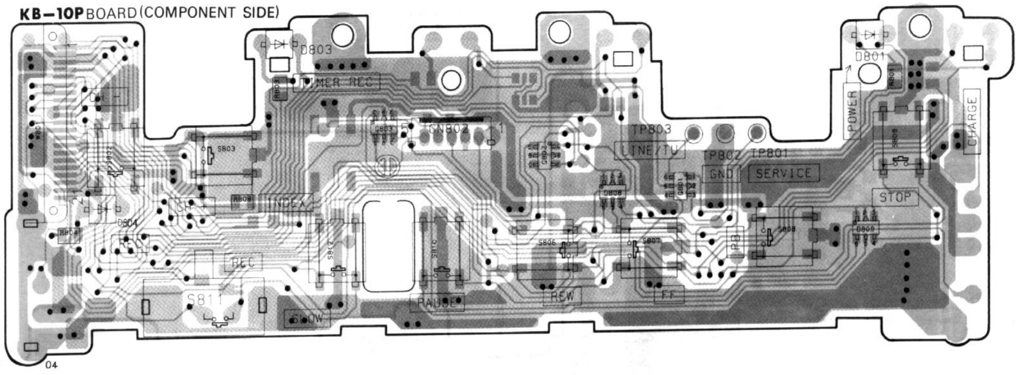
D801	8-719-970-40	GL-1EG101
D803	8-719-918-65	GL1PR102
D804	8-719-918-65	GL1PR102
D808	8-719-951-22	IMN10
D809	8-719-951-22	IMN10
D810	8-719-104-34	1S2836

< TRANSISTOR >

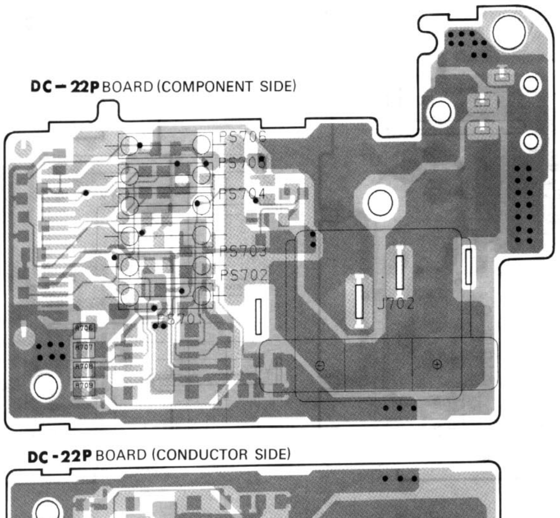
Q801	8-729-403-24	XN4210
Q802	8-729-403-24	XN4210
Q803	8-729-403-24	XN4210

89.)

KB–10P BOARD (COMPONENT SIDE)

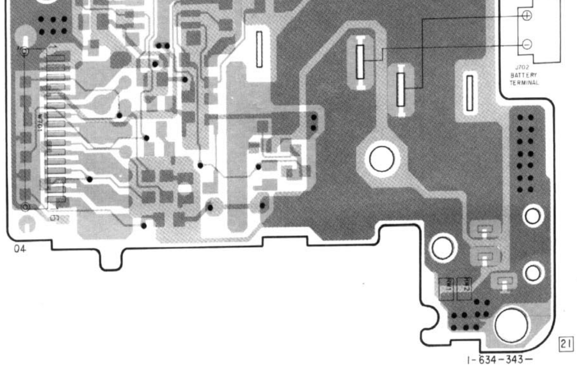

D803
TIMER REC
CN802
TP803
LINE/TV
TP802
TP801
GND
SERVICE
D801
POWER
CHARGE
STOP
INDEX
D804
REC
S811
SLOW
PAUSE
REW
FF
04

DC – 22P BOARD (COMPONENT SIDE)

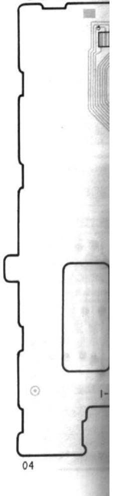

PS706
PS705
PS704
PS703
PS702
PS701
J702

89.)

DC -22P BOARD (CONDUCTOR SIDE)

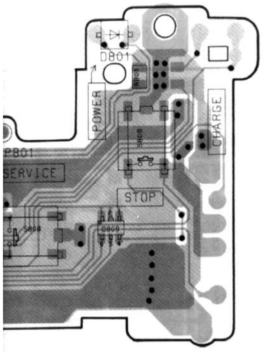

J702
BATTERY
TERMINAL
04
21
1-634-343-

UC-6 BOAR

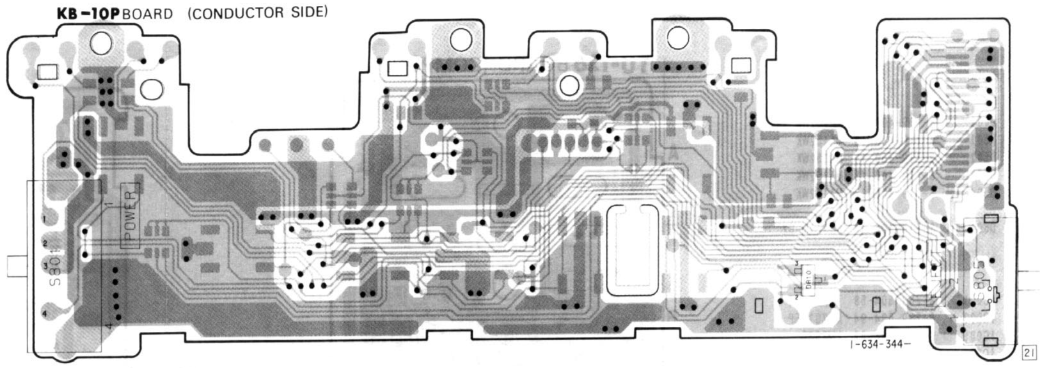


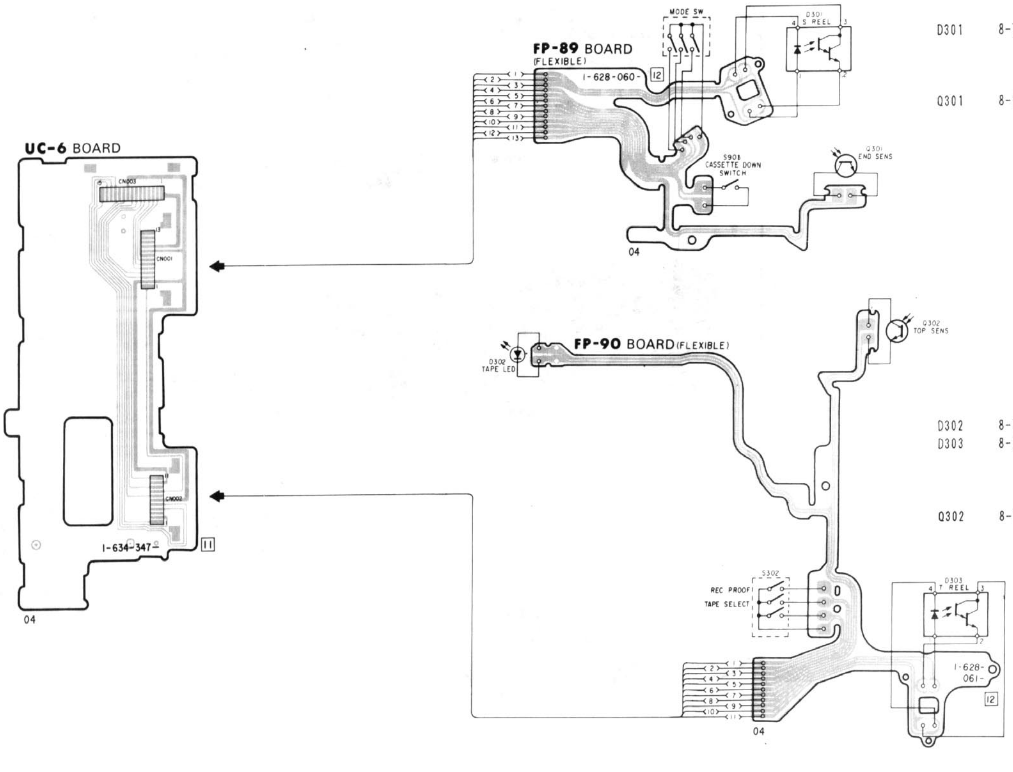
Note:
The components identi-
ied by mark ⚠ or dot-
ed line with mark ⚠
re critical for safety.
Replace only with part
umber specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.


D801
POWER
CHARGE
P801
SERVICE
STOP

KB-10P BOARD (CONDUCTOR SIDE)


POWER
S801
1-634-344-
21

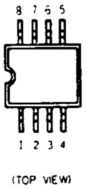

FP-89 BOARD
(FLEXIBLE)
1-628-060-
12
MODE SW
D301
S REEL
S903
CASSETTE DOWN
SWITCH
Q301
END SENS
04
UC-6 BOARD
CN003
CN001
CN002
1-634-347-
11
04
FP-90 BOARD (FLEXIBLE)
D302
TAPE LED
Q302
TOP SENS
S302
REC PROOF
TAPE SELECT
D303
T REEL
1-628-
061-
12
04

		< PHOTO COUPLER >
D301	8-719-820-44	TLP907-0 (SONY2)
		< SENSOR >
Q301	8-729-906-48	EE-TP109

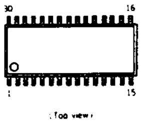
		< DIODE >
D302	8-719-940-81	GL452S
D303	8-719-820-44	TLP907-0 (SONY2)
		< SENSOR >
Q302	8-729-906-48	EE-TP109

4-3. SEMICONDUCTORS

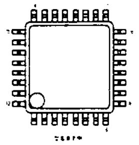
AK93C57F
FA7610N
LM311D
LM358D
LM393D
NJM2073M
NJM2233BM


8 7 6 5
1 2 3 4
(TOP VIEW)

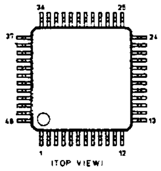
CXA1127M
CXA8006M


30
16
1
15
(Top view)

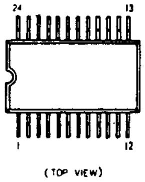
CXA1201Q



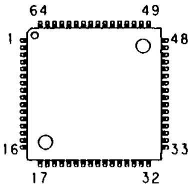
CXA1202R


36
25
37
24
48
13
1
12
(TOP VIEW)

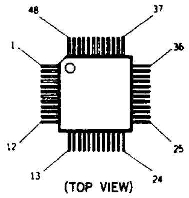
CXA1203N
CXA1219M


24
13
1
12
(TOP VIEW)

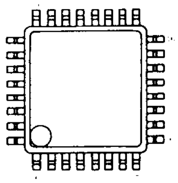
CXA1207


64
49
1
48
16
33
17
32

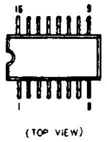
CXA1208R
CXA1237AR


48
37
1
36
12
25
13
24
(TOP VIEW)

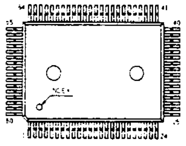
CXA1227Q



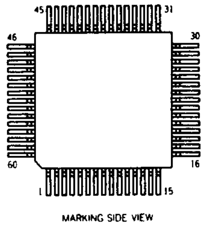
CXL1506M
CX20115A
MB3775PF
MC14053BF


16
9
1
8
(TOP VIEW)

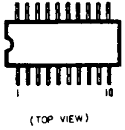
CXP50116
CXP80116



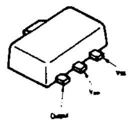
M52003


45
31
46
30
60
16
1
15
MARKING SIDE VIEW

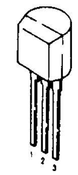
M52018FP
TDA3842T-T


20
11
1
10
(TOP VIEW)

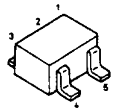
S-8052ALO-LG-S
S-8054ALR-LN-S



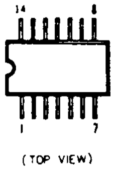
S-81350HG



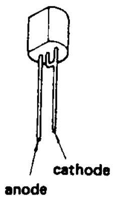
TC4SU69F
TC4S66F
TC4S81F



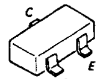
μPC339G2
μPD6451AGT-601


14
8
1
7
(TOP VIEW)

μPC574J


cathode
anode

DTA114EK
DTA124EK
DTA143EK
DTA144EK
DTC114EK
DTC124EK
DTC144EK
DTC144WK
2SA1162
2SA1179
2SA1576
2SB624
2SC1623
2SC2223
2SC3053
2SC4081



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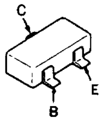
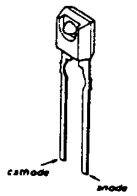
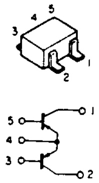
DTC114EU
DTC124EU
DTC144EU
DTC144TU
2SD1119



EE-TP109


cathode
anode

FMS1
FMY3
FMY4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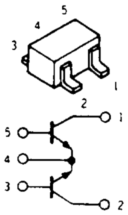
FMW2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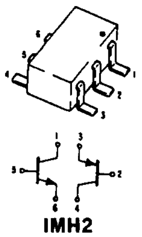

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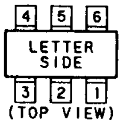
IMX2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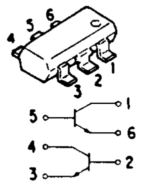
LETTER SIDE
3
2
1
(TOP VIEW)

XN4210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1
6
2

2SB1121
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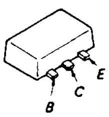

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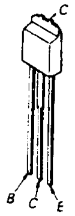

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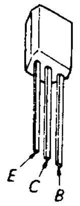

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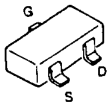

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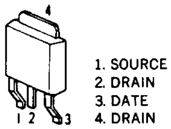
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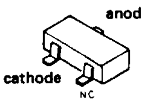
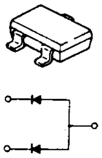
2. DRAIN
3. DATE
4. DRAIN

DAN202U
DA204U


anode
cathode
NC

DAP202U



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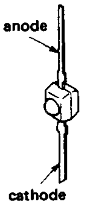
anode
cathode

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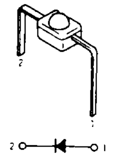
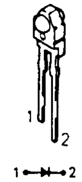


GL452S



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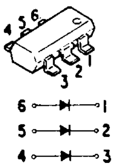
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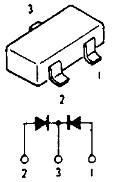
MA152WK



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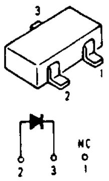
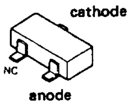
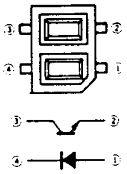
RD6.2M-B1
RD9.1M-B1
RD9.1M-B2
SB01-05CP
SB05-05CP



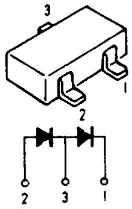
SB10-05PCP


cathode
NC
anode

TLP-907



1SS226



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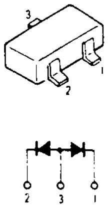
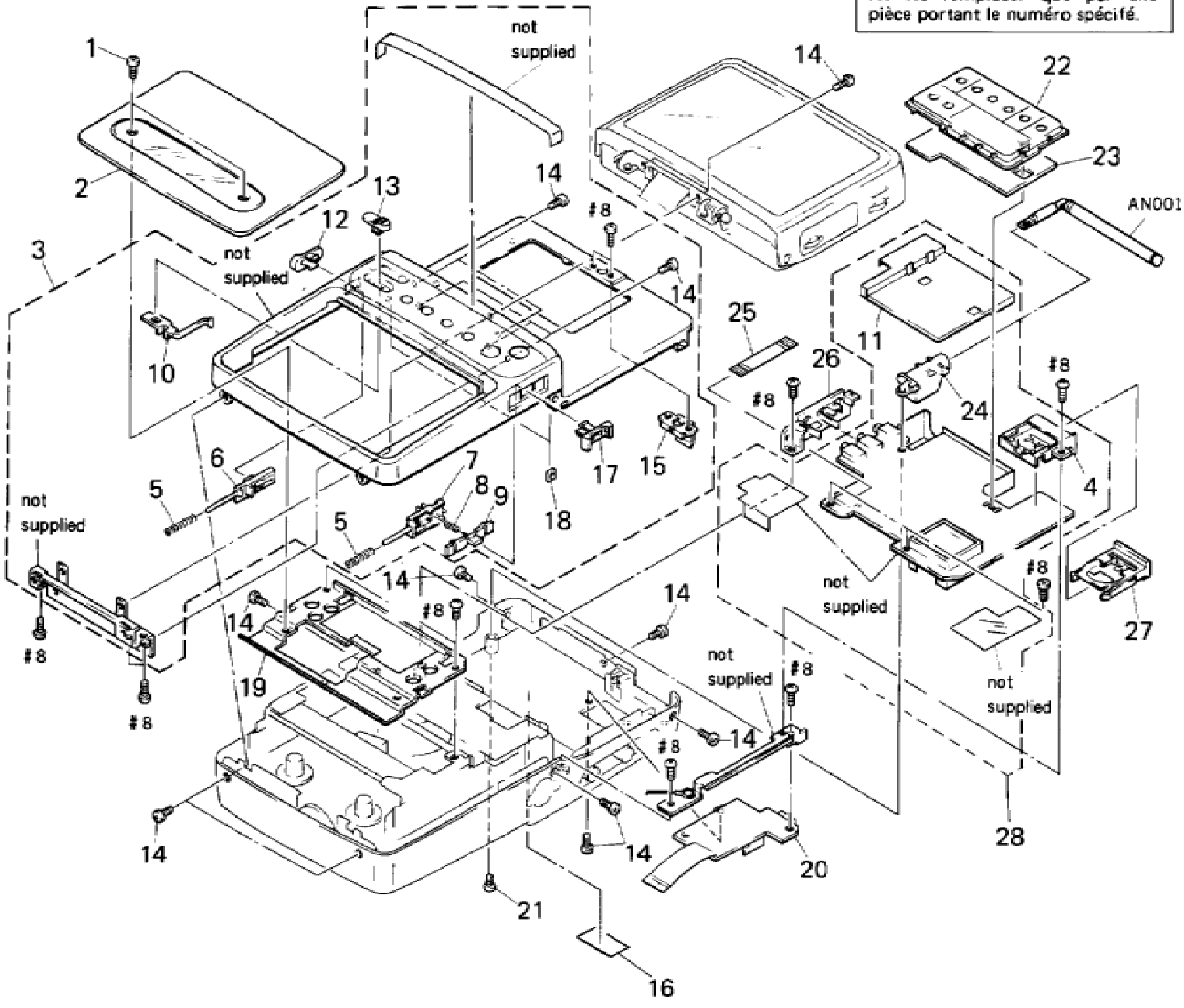


5-1. CABINET (UPPER) ASSEMBLY

sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.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12
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8
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17
18
15
not supplied
#8
#8
14
#8
14
19
#8
14
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14
21
16
14
22
23
AN001
11
25
26
#8
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4
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#8
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not supplied
#8
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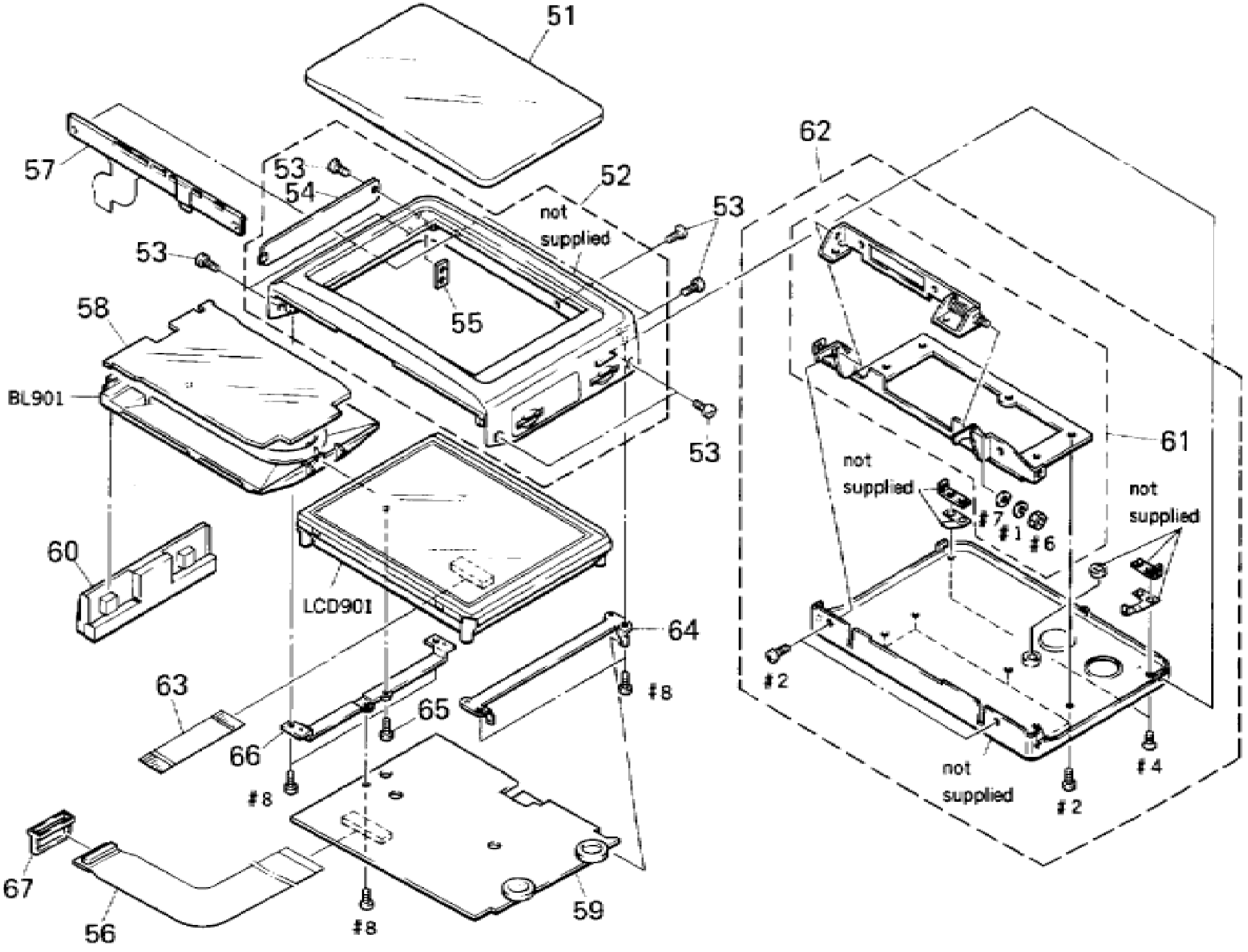
#8
14
20
28

5-2. SC UNIT ASSEMBLY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BL901
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#6
not supplied
60
LCD901
64
63
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#8
#2
66
#8
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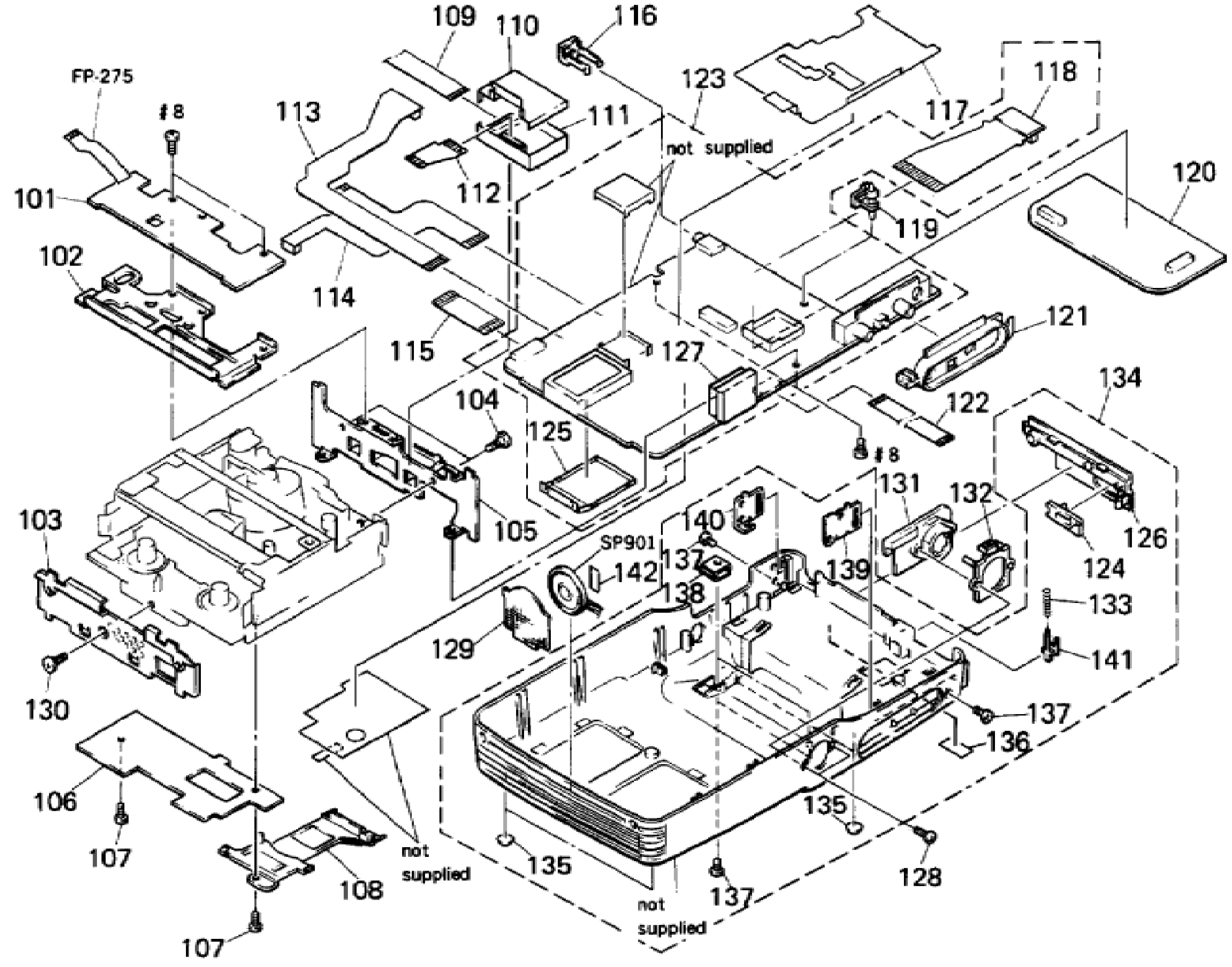
#4
#2
67
#8
59
56

5-3. CABINET (LOWER) ASSEMBLY


FP-275
#8
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112
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114
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118
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121
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125
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127
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129
130
131
132
133
134
135
135
136
137
137
137
138
139
140
141
142
SP901
#8
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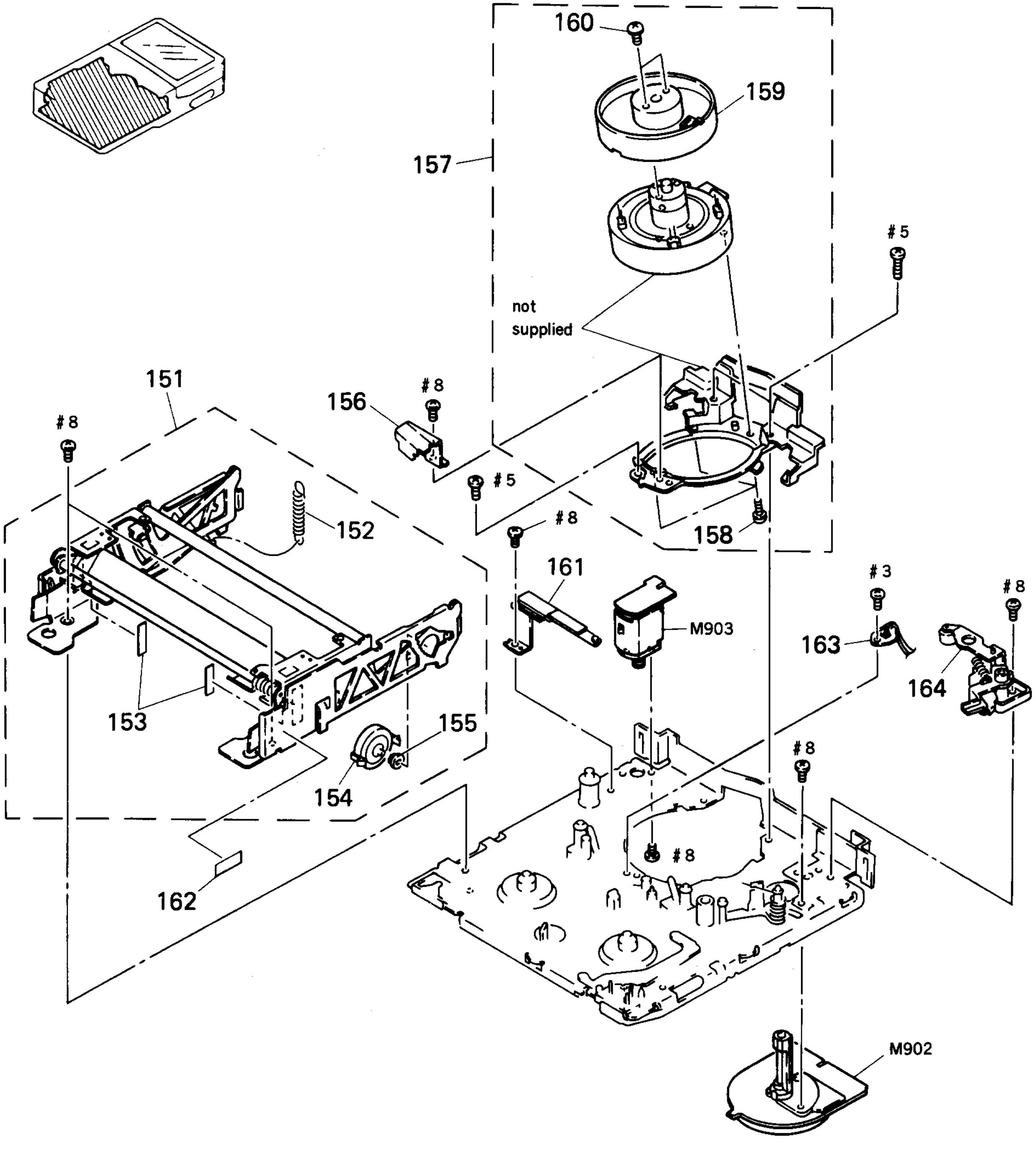
not supplied
not supplied

5-4. MECHANISM DECK ASSEMBLY (1)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supplied
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#8
#8
#5
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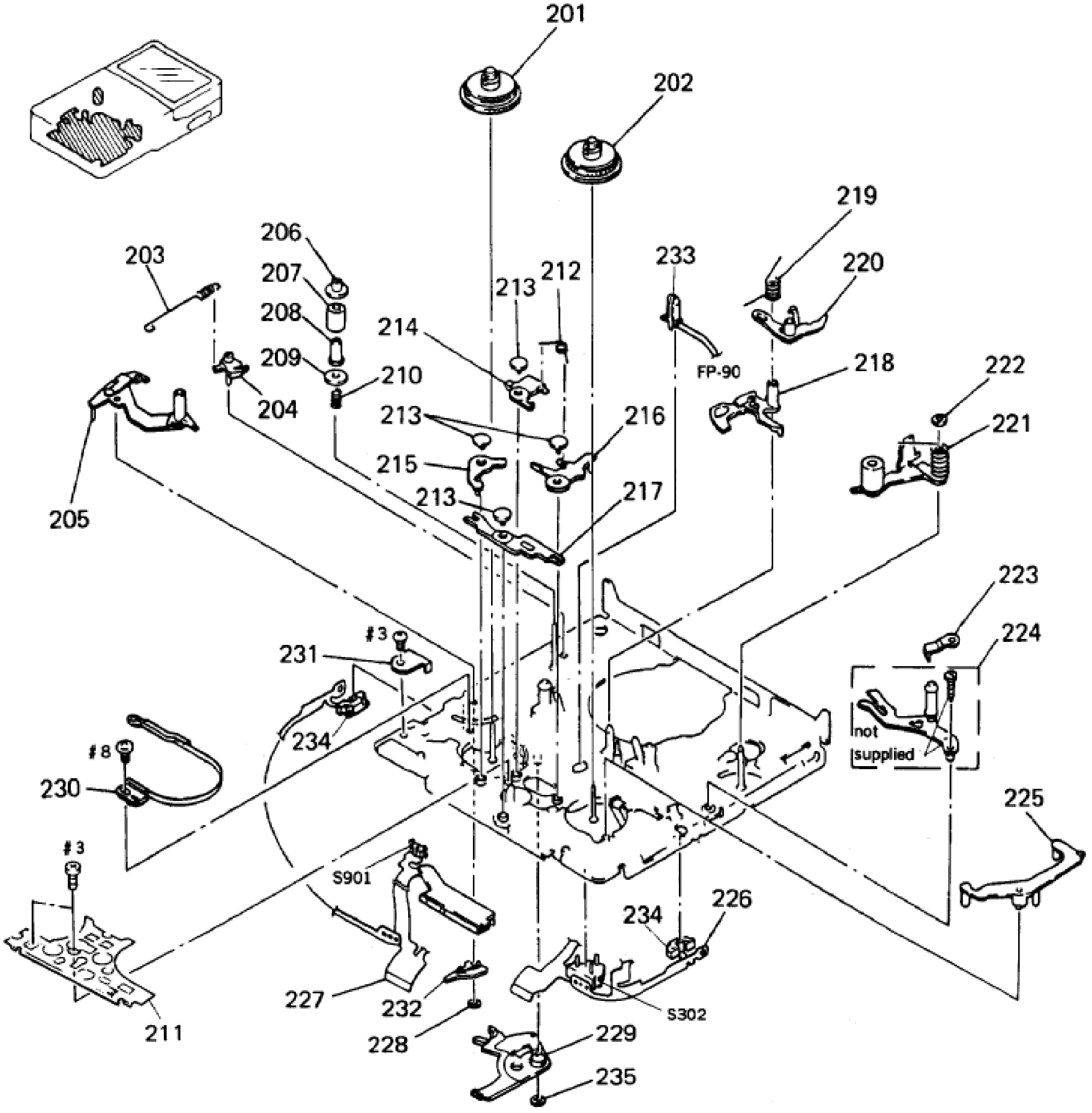
#8
158
161
M903
#3
#8
163
164
153
155
154
#8
#8
162
M902

5-5. MECHANISM DECK ASSEMBLY (2)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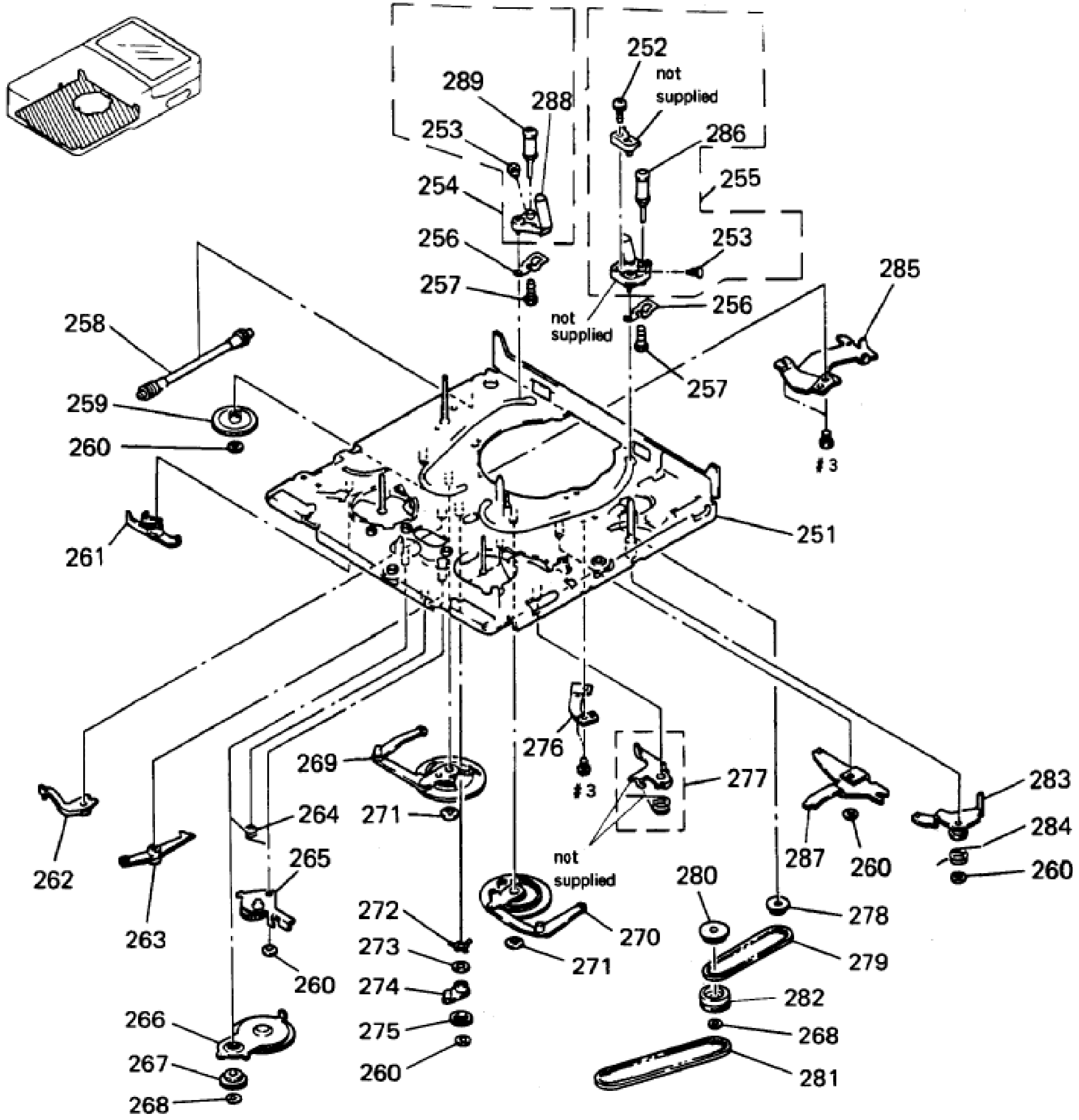
215
205
213
217
FP-90
223
#3
231
224
not
supplied
234
#8
230
225
#3
S901
234
226
227
232
S302
211
228
229
235

5-6. MECHANISM DECK ASSEMBLY (3)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255
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285
#3
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260
261
251
276
#3
277
not supplied
269
271
264
265
262
263
260
272
273
274
275
260
270
271
280
278
279
282
268
281
287
260
283
284
260
266
267
268

SECTION 5
EXPLODED VIEWS

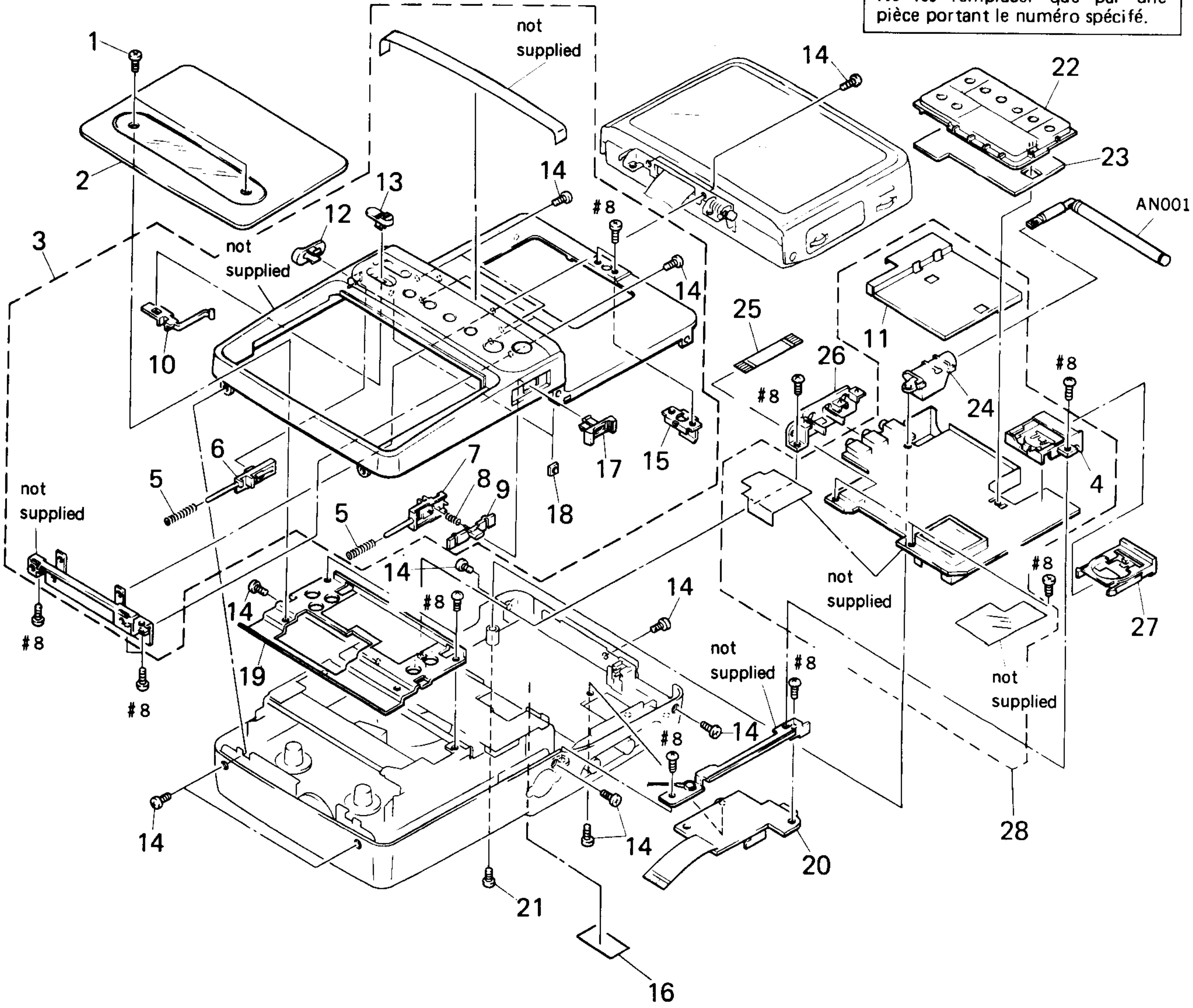
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE)...(RED)
  ↑ Parts Color ↑ Cabinet's Color
- Hardware(# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

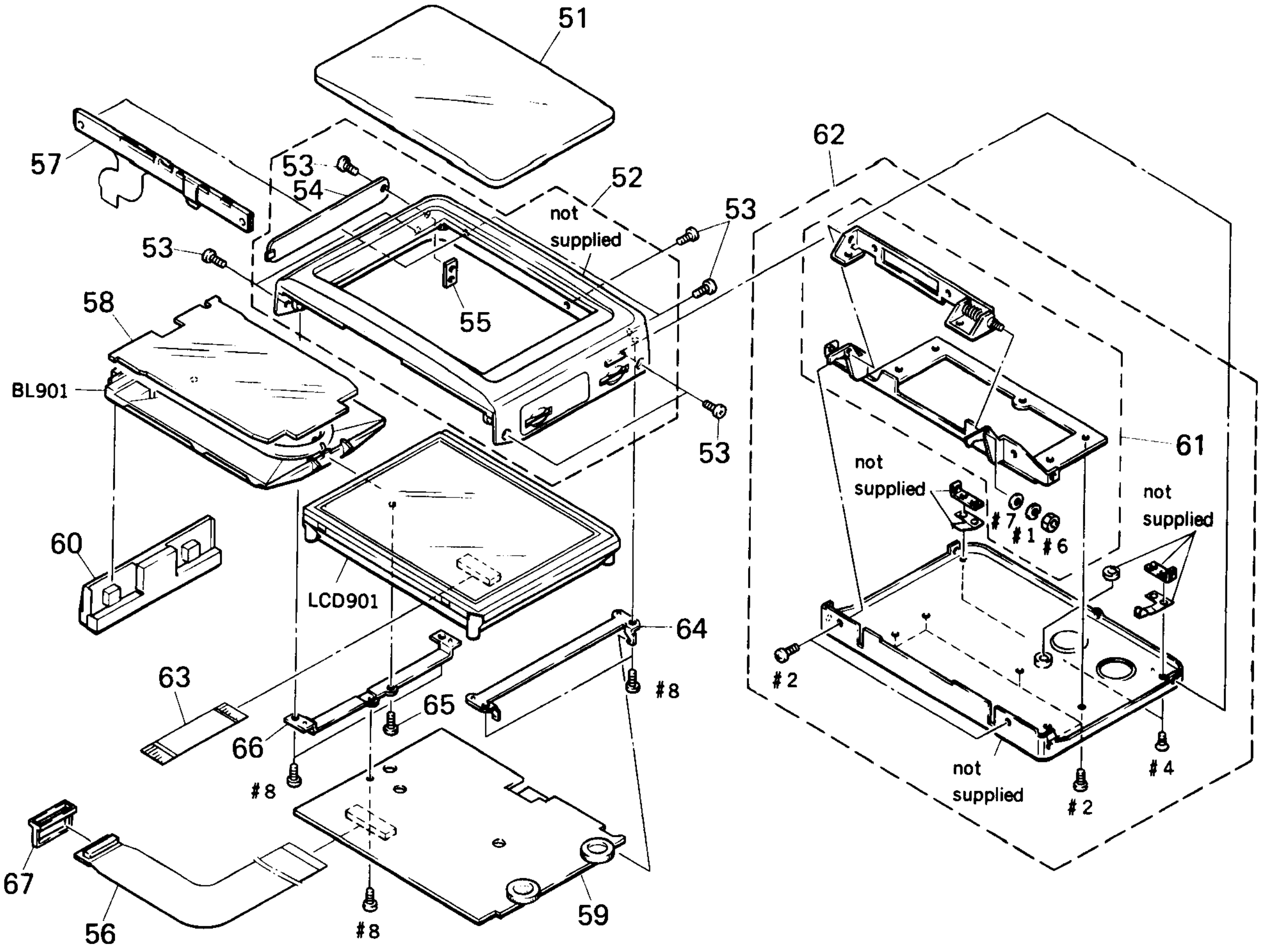
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

5-1. CABINET (UPPER) ASSEMBLY



Ref. No.	Part No.	Description	Remark
1	3-719-555-11	SCREW (M1.7X5.5)	
2	X-3940-351-1	LID ASSY, CASSETTE COMPARTMENT	
3	X-3940-353-1	CABINET ASSY, UPPER	
4	X-3728-887-1	GUIDE ASSY, BATTERY	
5	3-741-137-01	SPRING, COMPRESSION	
6	3-740-655-01	BUTTON, EJECT LOCK	
7	3-744-133-01	PLATE, SLIDE, POWER	
8	3-303-973-00	SPRING, COMPRESSION	
9	3-744-128-01	BUTTON, POWER LOCK	
10	3-744-132-01	PLATE, SLIDE, REC	
11	X-3728-886-1	LID ASSY, TU SHIELD CASE	
12	3-740-647-01	BUTTON, EJECT	
13	3-740-648-11	BUTTON, POWER	
14	3-719-381-01	SCREW (M2X4)	
15	X-3940-043-1	PLATE, LOCK ASSY	
16	* 3-941-662-01	LABEL, MODEL NUMBER (AE)	
17	3-744-131-01	BUTTON, POWER	
18	3-718-233-01	NUT, PLATE	
19	X-3940-021-1	REINFORCEMENT ASSY	
20	* A-7071-288-A	DC-22P BOARD, COMPLETE	
21	3-719-381-21	SCREW (M2X6)	
22	X-3940-350-1	HOLDER ASSY, SB	
23	* A-7071-318-A	SB-3P BOARD, COMPLETE	
24	3-744-166-01	HOLDER, ANTENNA	
25	1-575-856-11	CABLE, FLAT(1.0MM PITCH) 7 CORE	
26	3-744-165-22	COVER, HP JACK	
27	X-3728-883-1	HOLDER ASSY, BATTERY	
28	* A-7062-529-A	TU-126 BOARD, COMPLETE	
AN001	1-501-456-11	ANTENNA, TELESCOPIC	

5-2. SC UNIT ASSEMBLY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LCD901
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#8
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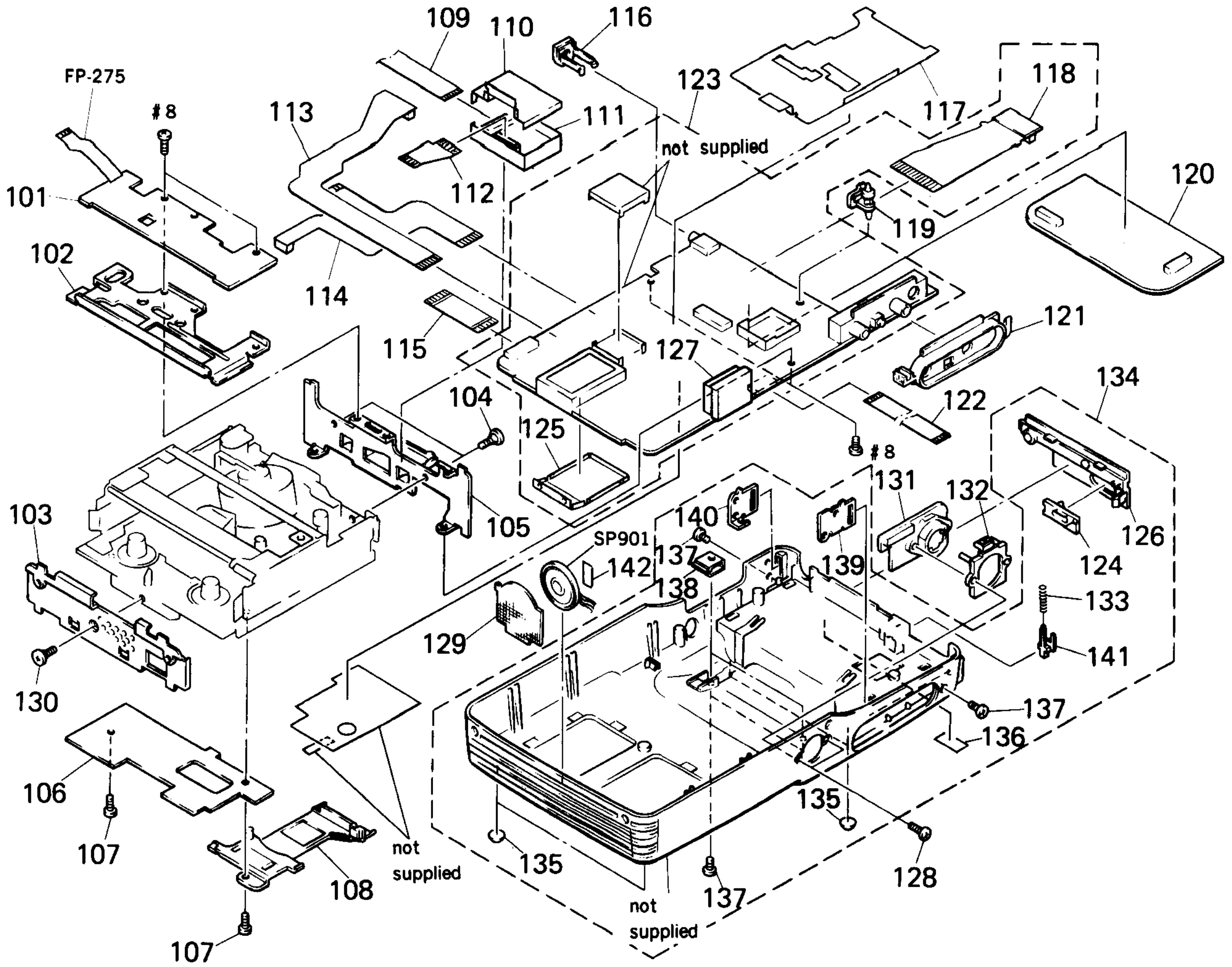
66
#8
#2
not supplied
#2
#4
67
56
#8
59

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
51	3-941-319-01	WINDOW (BOARD), SC	
52	X-3940-352-1	CABINET ASSY, SC UPPER	
53	3-719-381-01	SCREW (M2X4)	
54	3-744-174-01	COVER, SIDE	
55	3-730-103-01	NUT, PLATE	
56	1-634-994-11	FP-271 FLEXIBLE BOARD	
57	1-466-334-11	SWITCH BLOCK, CONTROL	
58	3-744-127-01	CURTAIN	
59	* A-7062-437-A	RG-22 BOARD, COMPLETE	
60	⚠· 1-466-333-11	INVERTER UNIT, DC-AC	

Ref. No.	Part No.	Description	Remark
61	X-3749-223-1	ARM, HINGE ASSY	
62	X-3940-019-1	CABINET (BOTTOM) ASSY, SC	
63	1-575-858-11	CABLE, FLAT (1.0MM PITCH) 16 CORE	
64	* 3-744-198-01	BRACKET (R), LCD	
65	3-719-408-01	SCREW (B2), TAPPING, P3	
66	* 3-744-199-01	BRACKET (L), LCD	
67	3-744-152-01	HOLDER, FPC	
BL901	1-518-668-11	TUBE UNIT, FLUORECENT	
LCD901	1-809-002-11	DISPLAY MODULE, LIQUID CRYSTAL	

5-3. CABINET (LOWER) ASSEMBLY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SP901
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130
137
136
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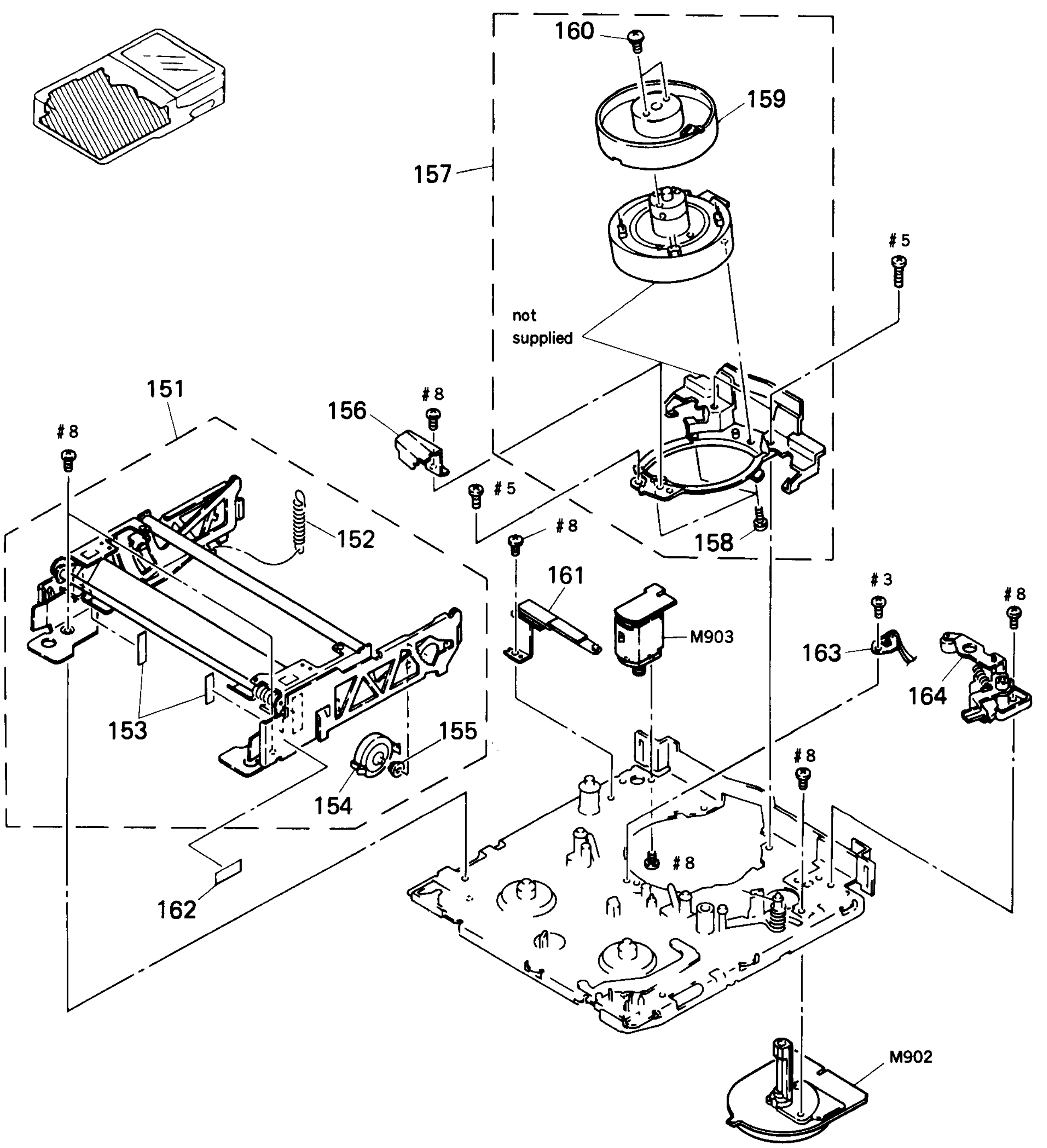
135
107
108
not supplied
135
128
107
not supplied
137

Ref. No.	Part No.	Description	Remark
101	* A-7071-319-A	KB-10P BOARD, COMPLETE	
102	X-3728-889-1	FRAME ASSY, KB	
103	X-3728-884-1	FRAME (FRONT) ASSY, MD	
104	3-732-791-11	SCREW (M2X3)	
105	X-3728-891-1	FRAME (REAR) ASSY, MD	
106	* 1-634-347-11	UC-6 BOARD	
107	3-719-408-01	SCREW (B2), TAPPING, P3	
108	* 3-744-176-01	COVER, MD	
109	1-634-992-11	FP-269 FLEXIBLE BOARD	
110	X-3728-885-1	LID ASSY, RP SHIELD CASE	
111	* A-7062-433-A	RP-105 BOARD, COMPLETE	
112	1-634-996-11	FP-273 FLEXIBLE BOARD	
113	1-634-997-11	FP-274 FLEXIBLE BOARD	
114	1-634-995-11	FP-272 FLEXIBLE BOARD	
115	1-575-859-11	CABLE, FLAT(1.0MM PITCH)15 CORE	
116	3-744-169-01	COVER, CS JACK	
117	* 3-941-171-01	COVER (CU), SV	
118	1-634-993-11	FP-270 FLEXIBLE BOARD	
119	3-742-816-01	SUPPORT (V), PC BOARD	
120	* A-7062-527-A	AU-93 BOARD, COMPLETE	
121	3-744-175-21	COVER, IO JACK	
122	1-575-857-11	CABLE, FLAT(1.0MM PITCH)12 CORE	
123	* A-7062-528-A	SV-66 BOARD, COMPLETE	
124	3-744-161-01	KNOB, RELEASE	
125	* X-3728-888-1	LID ASSY, REAR, SDD SHIELD CASE	
126	3-744-168-01	COVER, ANTENNA	
127	A-7062-436-A	CC-55 BOARD, COMPLETE	
128	3-719-381-21	SCREW (M2X6)	
129	X-3728-892-1	SPACER ASSY, SP	
130	3-744-603-11	SCREW	
131	* A-7071-289-A	CN-6P BOARD, COMPLETE	
132	3-744-157-01	SPACER, CN	
133	3-564-951-00	SPRING, COMPRESSION	
134	X-3940-354-1	CABINET ASSY, LOWER	
135	3-740-607-01	CUSHION	
136	* 3-747-370-01	LABEL, BATTERY FITTING	
137	3-719-381-01	SCREW (M2X4)	
138	3-736-496-01	BRACKET, STAND	
139	3-744-156-01	HOOK (R), BELT	
140	3-744-155-01	HOOK (L), BELT	
141	3-744-159-01	LEVER, RELEASE	
142	3-846-312-00	SPACER	
SP901	1-544-323-11	SPEAKER	

5-4. MECHANISM DECK ASSEMBLY (1)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#8
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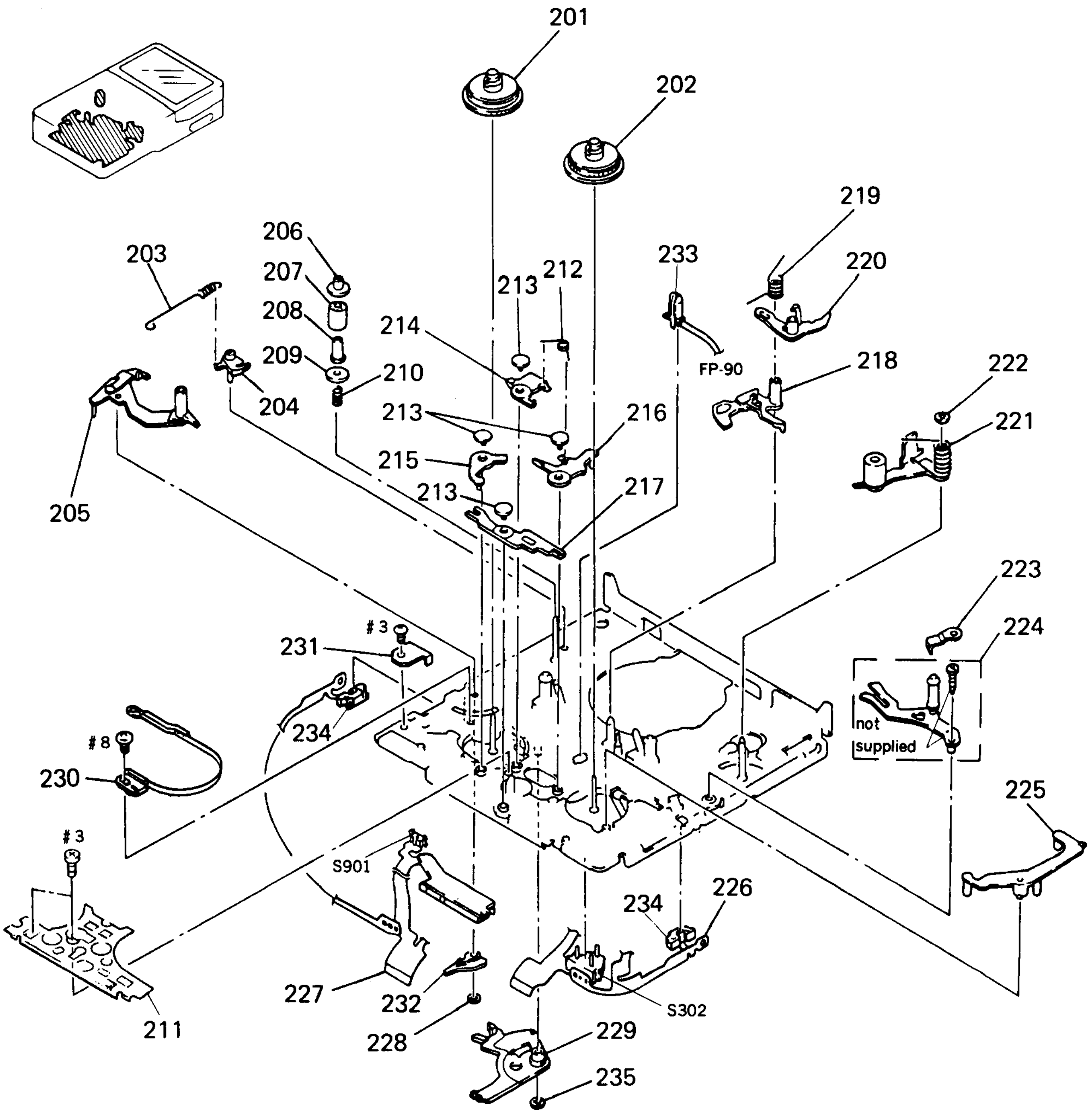
164
153
155
154
#8
#8
162
M902

Ref. No.	Part No.	Description	Remark
151	X-3728-873-1	CASSETTE COMPARTMENT ASSY	
152	3-728-825-03	SPRING, TENSION	
153	* 3-728-829-01	TAPE	
154	3-728-867-02	DAMPER, OIL	
155	3-728-828-02	GEAR, DAMPER	
156	3-728-868-01	GUARD, GUIDE	
157	A-7048-405-A	DRUM ASSY, (DGU-64A-R)	
158	3-686-493-01	SCREW, (M2X5), P1	
159	A-7049-343-A	DRUM ASSY, ROTARY (UPPER) (DGR-64-R)	
160	3-728-847-01	SCREW, (M2X4)	
161	X-3728-864-1	GROUND ASSY, SHAFT	
162	* 3-730-176-11	SHEET, MD	
163	1-808-505-12	SENSOR (DEW)	
164	A-7040-207-A	ROLLER BLOCK ASSY, HC	
M902	8-835-331-01	MOTOR, DC U-22A (CAPSTAN)	
M903	A-7040-208-A	MOTOR ASSY, THREADING (LOADING)	

5-5. MECHANISM DECK ASSEMBLY (2)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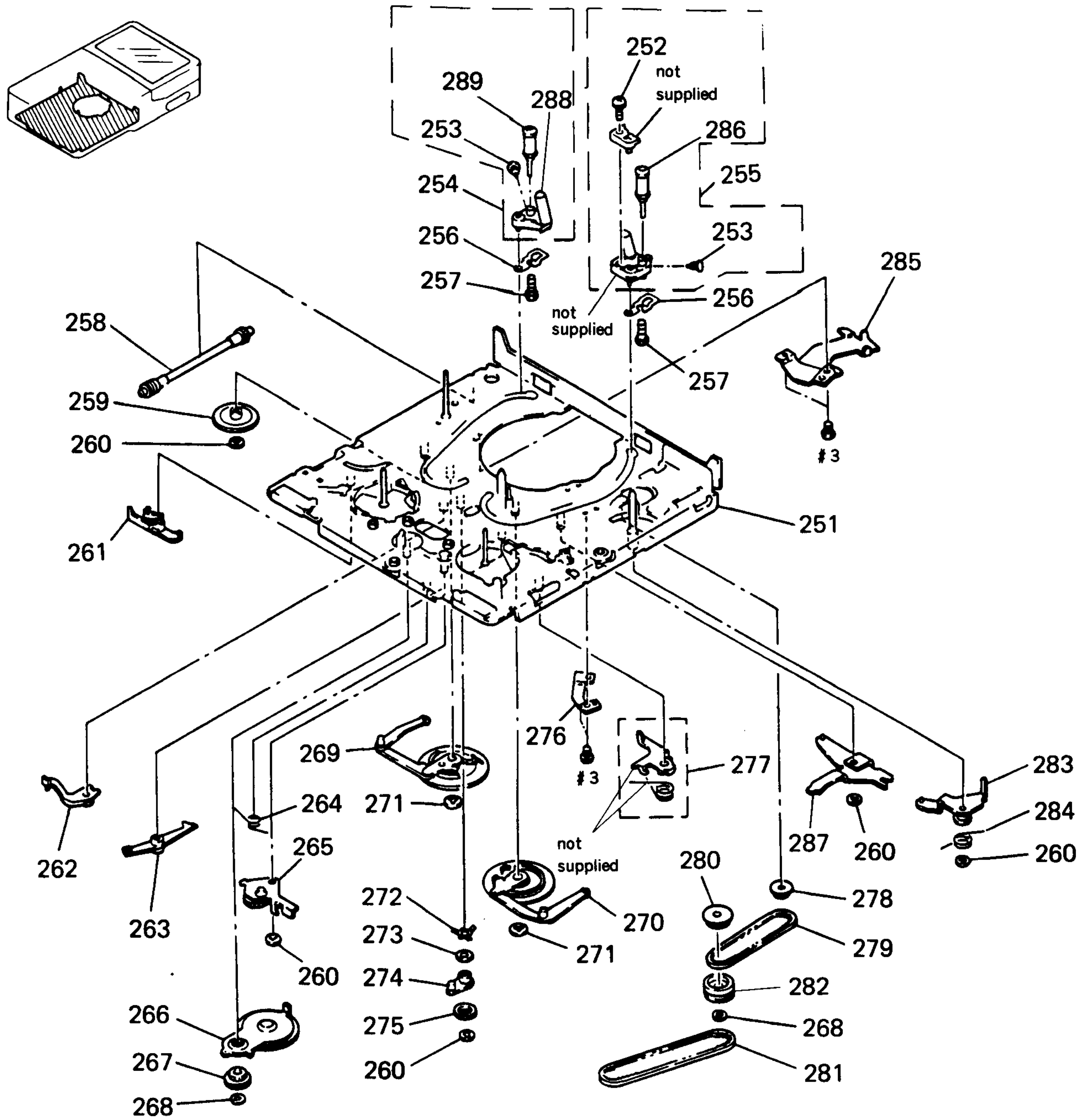
Ref. No.	Part No.	Description	Remark
201	X-3728-851-1	TABLE ASSY, REEL, S	
202	X-3728-855-1	TABLE ASSY, REEL, T	
203	3-736-414-01	SPRING, TENSION	
204	3-728-855-03	ARM, ADJUSTMENT	
205	X-3728-867-1	ARM ASSY (S), TENSION REGULATOR	
206	3-726-884-01	FLANGE, UPPER, TG2	
207	3-726-883-01	ROLLER, TG2	
208	3-726-885-01	SLEEVE, TG2	
209	3-726-882-02	FLANGE, LOWER, TG2	
210	3-726-886-01	SPRING, COMPRESSION	
211	3-741-195-01	PLATE, BLIND, RK	
212	3-726-866-01	SPRING (ST), TORSION	
213	3-726-858-01	PIN, SHAFT RETAINER	
214	3-728-849-01	BRAKE, S	
215	3-726-852-01	BRAKE, LB	
216	3-728-850-01	BRAKE, T	
217	3-726-853-01	LEVER, LB	
218	3-728-875-01	STOPPER, RK	
219	3-726-864-01	SPRING (RK), TORSION	
220	3-728-852-02	ARM, RK STOPPER	
221	A-7040-219-A	ARM BLOCK ASSY, PINCH	
222	3-669-465-00	WASHER (1.5), STOPPER	
223	3-728-808-01	SPRING, LEAF	
224	X-3728-869-1	ARM ASSY, TG7	
225	3-728-848-01	ARM, LB RELEASE	
226	1-628-061-12	FP-90 FLEXIBLE BOARD	
227	1-628-060-12	FP-89 FLEXIBLE BOARD	
228	3-321-393-11	WASHER, STOPPER	
229	X-3728-863-1	LEVER ASSY, SW	
230	X-3728-859-1	BAND ASSY, TENSION REGULATOR	
231	3-730-125-01	RETAINER, SW	
232	X-3728-857-1	STOPPER ASSY, TENSION REGULATOR	
233	3-728-837-01	HOLDER, LED	
234	3-728-869-02	HOLDER, SENSOR	
235	3-726-829-01	WASHER, STOPPER	
S302	1-572-298-11	SWITCH, PUSH	
S901	1-571-099-11	SWITCH	

5-6. MECHANISM DECK ASSEMBLY (3)



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Ref. No.	Part No.	Description	Remark
251	X-3728-862-1	CHASSIS ASSY, MECHANICAL	
252	3-736-473-01	SCREW (M2X0.25) (THREE LOCH)	
253	3-726-822-01	SCREW (M1.4X2) (STEP), HEAD	
254	A-7040-128-A	COASTER (LEFT) BLOCK ASSY	
255	A-7040-216-A	COASTER (RIGHT) BLOCK ASSY (M1P)	
256	3-736-485-01	SPRING, LEAF, COSTER	
257	3-726-830-01	SCREW (M1.4X4) (THREE LOCK)	
258	X-3728-868-1	WORM ASSY	
259	3-744-109-01	GEAR, WHEEL	
260	3-726-829-01	WASHER, STOPPER	
261	3-728-842-01	LEVER, EJECT	
262	3-728-851-01	BRAKE, UL	
263	3-726-854-01	ARM, BRAKE RELEASE	
264	3-726-865-01	SPRING (LB), TORSION	
265	A-7040-225-A	GEAR BLOCK ASSY (N), LB	
266	X-3728-866-1	GEAR ASSY, RK	
267	X-3728-858-1	GEAR ASSY, RC	
268	3-321-393-11	WASHER, STOPPER	
269	X-3728-842-1	GEAR (LEFT) ASSY, DRIVE	
270	X-3728-843-1	GEAR (RIGHT) ASSY, DRIVE	
271	3-669-465-00	WASHER (1.5), STOPPER	
272	3-726-867-01	SPRING, LEAF	
273	3-701-436-21	WASHER, POLYEHTHYLENE	
274	3-726-857-03	ARM, UL	
275	3-726-856-04	GEAR, UL	
276	* 3-726-805-01	REINFORCEMENT (TT)	
277	X-3726-808-2	BRAKE ASSY, TS	
278	X-3726-805-1	GEAR ASSY, JOINT	
279	3-728-866-11	BELT (S), TIMING	
280	X-3726-813-1	PULLEY (UPPER) ASSY, MIDWAY	
281	3-741-197-01	BELT (L), TIMING	
282	3-741-196-01	PULLEY (LOWER), BELT MIDWAY	
283	X-3726-824-1	ARM ASSY, PINCH SUB	
284	3-726-895-01	SPRING	
285	X-3726-841-1	REINFORCEMENT (SS) ASSY	
286	X-3728-808-4	ROLLER ASSY (U) (PLATING), GUIDE	
287	3-941-322-01	LEVER, THREADING	
288	X-3726-818-1	COASTER (LEFT) ASSY	
289	X-3726-820-1	ROLLER ASSY (U), GUIDE	

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- CAPACITORS
  uF: μF
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: μH
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD....

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

Ref. No.	Part No.	Description			Remark
*	A-7062-527-A	AU-93 BOARD, COMPLETE			
		**********************			
		(Ref.No 7,000 Series)			
		< CAPACITOR >			
C001	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C002	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C003	1-164-173-11	CERAMIC CHIP	0.0039uF	10%	50V
C004	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C005	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C006	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C007	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C009	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C010	1-128-008-11	ELECT CHIP	3.3uF	20%	35V
C012	1-128-007-11	ELECT CHIP	2.2uF	20%	35V
C013	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C014	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C015	1-128-006-11	ELECT CHIP	4.7uF	20%	25V
C016	1-164-362-11	CERAMIC CHIP	470PF		50V
C017	1-128-006-11	ELECT CHIP	4.7uF	20%	25V
C018	1-162-936-11	CERAMIC CHIP	5PF	0.25PF	50V
C019	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C020	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C021	1-162-587-11	CERAMIC CHIP	0.039uF	10%	25V
C022	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C023	1-164-174-11	CERAMIC CHIP	0.0082uF	10%	25V
C024	1-128-013-11	ELECT CHIP	1uF	20%	50V
C025	1-128-004-11	ELECT CHIP	10uF	20%	16V
C026	1-128-004-11	ELECT CHIP	10uF	20%	16V
C027	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C028	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C029	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C030	1-126-209-11	ELECT CHIP	100uF	20%	4V
C031	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C032	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C033	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C034	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C035	1-162-956-11	CERAMIC CHIP	180PF	5%	50V
C036	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C037	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C038	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C039	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C040	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C041	1-128-012-11	ELECT CHIP	0.47uF	20%	50V
C042	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C043	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C045	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C046	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C047	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C048	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C049	1-128-004-11	ELECT CHIP	10uF	20%	16V
C050	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C051	1-128-004-11	ELECT CHIP	10uF	20%	16V
C052	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C053	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C054	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C055	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C056	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C057	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C058	1-128-007-11	ELECT CHIP	2.2uF	20%	35V
C059	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C060	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C061	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C062	1-128-013-11	ELECT CHIP	1uF	20%	50V
C063	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C064	1-135-217-21	TANTALUM CHIP	15uF	20%	6.3V

Ref. No.	Part No.	Description				Remark
C301	1-164-155-11	CERAMIC CHIP	75PF	10%	50V	
C302	1-162-920-11	CERAMIC CHIP	27PF	5%	50V	
C303	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
C304	1-135-201-11	TANTALUM CHIP	10uF	20%	4V	
C306	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C309	1-162-947-11	CERAMIC CHIP	33PF	5%	50V	
C310	1-162-956-11	CERAMIC CHIP	180PF	5%	50V	
C311	1-162-947-11	CERAMIC CHIP	33PF	5%	50V	
C312	1-162-956-11	CERAMIC CHIP	180PF	5%	50V	
C313	1-164-361-11	CERAMIC CHIP	0.047uF		16V	
C314	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	
C315	1-128-006-11	ELECT CHIP	4.7uF	20%	25V	
C316	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C317	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	
C319	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
C320	1-162-920-11	CERAMIC CHIP	27PF	5%	50V	
C321	1-164-155-11	CERAMIC CHIP	75PF	10%	50V	
C322	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
C323	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C324	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C325	1-135-201-11	TANTALUM CHIP	10uF	20%	4V	
C326	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C327	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
C328	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	
C329	1-128-004-11	ELECT CHIP	10uF	20%	16V	
C331	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
C332	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C333	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	
C334	1-128-013-11	ELECT CHIP	1uF	20%	50V	
C335	1-128-013-11	ELECT CHIP	1uF	20%	50V	
C337	1-164-217-11	CERAMIC CHIP	150PF	0.25PF	50V	
C338	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C339	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	
C340	1-128-004-11	ELECT CHIP	10uF	20%	16V	
C341	1-128-013-11	ELECT CHIP	1uF	20%	50V	
C342	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C344	1-164-218-11	CERAMIC CHIP	180PF	0.25PF	50V	
C345	1-162-917-11	CERAMIC CHIP	15PF	5%	50V	
C348	1-135-217-21	TANTALUM CHIP	15uF	20%	6.3V	
C349	1-164-315-11	CERAMIC CHIP	470PF	10%	50V	
C352	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C353	1-135-161-21	TANTALUM CHIP	22uF	10%	6.3V	
C360	1-126-246-11	ELECT CHIP	220uF	20%	4V	
C361	1-135-201-11	TANTALUM CHIP	10uF	20%	4V	
C362	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
C363	1-162-926-11	CERAMIC CHIP	82PF	5%	50V	
C364	1-162-926-11	CERAMIC CHIP	82PF	5%	50V	
C365	1-162-921-11	CERAMIC CHIP	33PF	5%	50V	
C367	1-135-202-21	TANTAL. CHIP	22uF	20%	4V	
C368	1-164-386-11	CERAMIC CHIP	0.0002uF	0.25PF	50V	
C370	1-162-926-11	CERAMIC CHIP	82PF	5%	50V	
C371	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	
C372	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C373	1-126-205-11	ELECT CHIP	47uF	20%	6.3V	
C380	1-135-202-21	TANTAL. CHIP	22uF	20%	4V	
C381	1-162-920-11	CERAMIC CHIP	27PF	5%	50V	
C382	1-162-928-11	CERAMIC CHIP	120PF	5%	50V	
C383	1-162-957-11	CERAMIC CHIP	220PF	5%	50V	
C384	1-162-957-11	CERAMIC CHIP	220PF	5%	50V	
C390	1-126-205-11	ELECT CHIP	47uF	20%	6.3V	
C391	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C392	1-135-201-11	TANTALUM CHIP	10uF	20%	4V	
C393	1-135-201-11	TANTALUM CHIP	10uF	20%	4V	
C394	1-135-201-11	TANTALUM CHIP	10uF	20%	4V	
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CN001	1-569-635-41	CONNECTOR, BOARD TO BOARD 20P				
CN002	1-569-636-41	CONNECTOR, BOARD TO BOARD 22P				
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D001	8-719-941-23	DIODE	DA204U			
D002	8-719-941-86	DIODE	DAN202U			
D003	8-719-941-86	DIODE	DAN202U			
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DL301	1-415-816-11	DELAY LINE, ULTRASONIC (GLASS)				
		< FILTER >				
FL001	1-236-145-11	FILTER, BAND PASS				
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IC001	8-752-033-01	IC	CXA1237AR			
IC002	8-759-234-77	IC	TC4S66F			
IC003	8-759-701-02	IC	NJM2073M			
IC301	8-752-035-00	IC	CXA1227Q			
IC302	8-752-034-04	IC	CXA1219M			
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L001	1-412-032-11	INDUCTOR CHIP	100uH			
L002	1-410-658-31	INDUCTOR CHIP	220uH			
L301	1-410-383-31	INDUCTOR CHIP	15uH			
L302	1-410-381-11	INDUCTOR CHIP	10uH			
L303	1-410-381-11	INDUCTOR CHIP	10uH			
L304	1-410-383-31	INDUCTOR CHIP	15uH			
L305	1-410-380-31	INDUCTOR CHIP	8.2uH			
L306	1-410-380-31	INDUCTOR CHIP	8.2uH			
L307	1-410-392-11	INDUCTOR CHIP	82uH			
L308	1-410-379-31	INDUCTOR CHIP	6.8uH			

Ref. No.	Part No.	Description	Remark
L310	1-410-390-11	INDUCTOR CHIP 56uH	
L311	1-410-393-11	INDUCTOR CHIP 100uH	
L312	1-410-390-11	INDUCTOR CHIP 56uH	
L313	1-410-391-11	INDUCTOR CHIP 68uH	
L314	1-410-390-11	INDUCTOR CHIP 56uH	
L320	1-412-032-11	INDUCTOR CHIP 100uH	
L321	1-412-030-11	INDUCTOR CHIP 22uH	
L322	1-410-389-31	INDUCTOR CHIP 47uH	
L323	1-412-030-11	INDUCTOR CHIP 22uH	
L324	1-412-032-11	INDUCTOR CHIP 100uH	
L325	1-412-032-11	INDUCTOR CHIP 100uH	

< VARIABLE COIL >

Ref. No.	Part No.	Description	Remark
LV301	1-460-144-11	COIL, VARIABLE 47uH	
LV302	1-460-144-11	COIL, VARIABLE 47uH	
LV304	1-460-143-11	COIL, VARIABLE 3.3uH	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remark
Q001	8-729-905-23	TRANSISTOR 2SA1576-R	
Q002	8-729-905-35	TRANSISTOR 2SC4081-R	
Q003	8-729-905-18	TRANSISTOR DTC144EU	
Q004	8-729-905-35	TRANSISTOR 2SC4081-R	
Q005	8-729-905-35	TRANSISTOR 2SC4081-R	
Q006	8-729-905-35	TRANSISTOR 2SC4081-R	
Q007	8-729-905-35	TRANSISTOR 2SC4081-R	
Q008	8-729-905-35	TRANSISTOR 2SC4081-R	
Q009	8-729-141-48	TRANSISTOR 2SB624-BV345	
Q010	8-729-920-85	TRANSISTOR 2SD1664-QR	
Q302	8-729-905-35	TRANSISTOR 2SC4081-R	
Q303	8-729-905-35	TRANSISTOR 2SC4081-R	
Q304	8-729-905-35	TRANSISTOR 2SC4081-R	
Q305	8-729-905-35	TRANSISTOR 2SC4081-R	
Q306	8-729-905-23	TRANSISTOR 2SA1576-R	
Q307	8-729-905-35	TRANSISTOR 2SC4081-R	
Q308	8-729-905-35	TRANSISTOR 2SC4081-R	
Q309	8-729-905-35	TRANSISTOR 2SC4081-R	
Q310	8-729-905-35	TRANSISTOR 2SC4081-R	
Q311	8-729-905-35	TRANSISTOR 2SC4081-R	
Q312	8-729-905-18	TRANSISTOR DTC144EU	

< RESISTOR >

Ref. No.	Part No.	Description	Remark
R001	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R002	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R003	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R004	1-216-850-11	METAL CHIP 270K 5% 1/16W	
R005	1-216-857-11	METAL CHIP 1M 5% 1/16W	
R006	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R007	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R008	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R009	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R010	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R016	1-216-849-11	METAL CHIP 220K 5% 1/16W	
R017	1-216-819-11	METAL CHIP 680 5% 1/16W	
R018	1-216-820-11	METAL CHIP 820 5% 1/16W	
R019	1-216-820-11	METAL CHIP 820 5% 1/16W	
R020	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R021	1-216-834-11	METAL CHIP 12K 5% 1/16W	
R022	1-216-828-11	METAL CHIP 3.9K 5% 1/16W	
R023	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R024	1-216-819-11	METAL CHIP 680 5% 1/16W	
R025	1-216-826-11	METAL CHIP 2.7K 5% 1/16W	
R026	1-216-826-11	METAL CHIP 2.7K 5% 1/16W	
R027	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R028	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R029	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R030	1-216-838-11	METAL CHIP 27K 5% 1/16W	
R031	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R032	1-216-835-11	METAL CHIP 15K 5% 1/16W	
R034	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R035	1-216-828-11	METAL CHIP 3.9K 5% 1/16W	
R037	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R038	1-216-836-11	METAL CHIP 18K 5% 1/16W	
R039	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R040	1-216-836-11	METAL CHIP 18K 5% 1/16W	
R041	1-216-838-11	METAL CHIP 27K 5% 1/16W	
R042	1-216-831-11	METAL CHIP 6.8K 5% 1/16W	
R043	1-216-831-11	METAL CHIP 6.8K 5% 1/16W	
R046	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R047	1-216-826-11	METAL CHIP 2.7K 5% 1/16W	
R048	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R049	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R050	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R051	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R052	1-216-835-11	METAL CHIP 15K 5% 1/16W	
R053	1-216-838-11	METAL CHIP 27K 5% 1/16W	
R054	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R055	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R057	1-216-819-11	METAL CHIP 680 5% 1/16W	
R058	1-216-832-11	METAL CHIP 8.2K 5% 1/16W	
R059	1-216-819-11	METAL CHIP 680 5% 1/16W	
R060	1-216-789-11	METAL CHIP 2.2 5% 1/16W	
R061	1-216-789-11	METAL CHIP 2.2 5% 1/16W	
R064	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R065	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R066	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R073	1-216-826-11	METAL CHIP 2.7K 5% 1/16W	

Ref. No.	Part No.	Description			Remark
R074	1-216-838-11	METAL CHIP	27K	5%	1/16W
R075	1-216-837-11	METAL CHIP	22K	5%	1/16W
R077	1-216-833-11	METAL CHIP	10K	5%	1/16W
R078	1-216-833-11	METAL CHIP	10K	5%	1/16W
R079	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R080	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R081	1-216-803-11	METAL CHIP	33	5%	1/16W
R099	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R301	1-216-816-11	METAL CHIP	390	5%	1/16W
R302	1-216-836-11	METAL CHIP	18K	5%	1/16W
R303	1-216-861-11	METAL CHIP	2.2M	5%	1/16W
R306	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R307	1-216-865-11	METAL CHIP	3K	5%	1/16W
R308	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R309	1-216-865-11	METAL CHIP	3K	5%	1/16W
R310	1-216-835-11	METAL CHIP	15K	5%	1/16W
R311	1-216-845-11	METAL CHIP	100K	5%	1/16W
R312	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R313	1-216-816-11	METAL CHIP	390	5%	1/16W
R314	1-216-816-11	METAL CHIP	390	5%	1/16W
R315	1-216-816-11	METAL CHIP	390	5%	1/16W
R316	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R317	1-216-833-11	METAL CHIP	10K	5%	1/16W
R318	1-216-685-11	METAL CHIP	27K	0.5%	1/10W
R319	1-216-821-11	METAL CHIP	1K	5%	1/16W
R321	1-216-817-11	METAL CHIP	470	5%	1/16W
R322	1-216-818-11	METAL CHIP	560	5%	1/16W
R323	1-216-864-11	METAL CHIP	0		
R324	1-216-835-11	METAL CHIP	15K	5%	1/16W
R325	1-216-864-11	METAL CHIP	0		
R334	1-216-857-11	METAL CHIP	1M	5%	1/16W
R350	1-216-815-11	METAL CHIP	330	5%	1/16W
R351	1-216-046-00	METAL CHIP	750	5%	1/10W
R352	1-216-817-11	METAL CHIP	470	5%	1/16W
R353	1-216-835-11	METAL CHIP	15K	5%	1/16W
R354	1-216-839-11	METAL CHIP	33K	5%	1/16W
R355	1-216-821-11	METAL CHIP	1K	5%	1/16W
R356	1-216-821-11	METAL CHIP	1K	5%	1/16W
R357	1-216-816-11	METAL CHIP	390	5%	1/16W
R358	1-216-819-11	METAL CHIP	680	5%	1/16W
R359	1-216-837-11	METAL CHIP	22K	5%	1/16W
R360	1-216-837-11	METAL CHIP	22K	5%	1/16W
R361	1-216-819-11	METAL CHIP	680	5%	1/16W
R362	1-216-819-11	METAL CHIP	680	5%	1/16W
R364	1-216-821-11	METAL CHIP	1K	5%	1/16W
R365	1-216-819-11	METAL CHIP	680	5%	1/16W
R366	1-216-819-11	METAL CHIP	680	5%	1/16W
R367	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R368	1-216-820-11	METAL CHIP	820	5%	1/16W
R369	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R370	1-216-821-11	METAL CHIP	1K	5%	1/16W
R371	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R372	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R373	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R376	1-216-837-11	METAL CHIP	22K	5%	1/16W
R377	1-216-833-11	METAL CHIP	10K	5%	1/16W
R380	1-216-821-11	METAL CHIP	1K	5%	1/16W
R381	1-216-821-11	METAL CHIP	1K	5%	1/16W
R382	1-216-837-11	METAL CHIP	22K	5%	1/16W
R383	1-216-838-11	METAL CHIP	27K	5%	1/16W
R385	1-216-842-11	METAL CHIP	56K	5%	1/16W
R386	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R387	1-216-833-11	METAL CHIP	10K	5%	1/16W

< VARIABLE RESISTOR >

RV002	1-238-090-11	RES, ADJ CERMET10K
RV003	1-238-091-11	RES, ADJ CERMET22K
RV301	1-238-090-11	RES, ADJ CERMET10K
RV302	1-238-090-11	RES, ADJ CERMET10K
RV303	1-238-092-11	RES, ADJ CERMET47K

< CRYSTAL >

X301	1-577-117-21	VIBRATOR, CRYSTAL (4.43MHz)

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A-7062-436-A CC-55 BOARD, COMPLETE

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(Ref.No 5,000 Series)

< CAPACITOR >

C001	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
C002	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C003	1-135-180-21	TANTALUM CHIP	3.3uF	20%	6.3V
C004	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C005	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
C006	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C007	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
C008	1-135-180-21	TANTALUM CHIP	3.3uF	20%	6.3V
C009	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
C010	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C011	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
C012	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
C013	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C014	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
C015	1-135-180-21	TANTALUM CHIP	3.3uF	20%	6.3V
C016	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
C017	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C018	1-162-946-11	CERAMIC CHIP	27PF	5%	50V

Ref. No.	Part No.	Description	Remark
		< IC >	
IC001	8-752-333-24	IC CXL1506M	
		< COIL >	
L001	1-410-988-11	INDUCTOR, CHIP 0.39uH	
L002	1-410-988-11	INDUCTOR, CHIP 0.39uH	
L003	1-412-031-11	INDUCTOR, CHIP 47uH	
L004	1-410-988-11	INDUCTOR, CHIP 0.39uH	
L005	1-410-988-11	INDUCTOR, CHIP 0.39uH	
L006	1-410-988-11	INDUCTOR, CHIP 0.39uH	
L007	1-410-988-11	INDUCTOR, CHIP 0.39uH	
L008	1-412-031-11	INDUCTOR, CHIP 47uH	
L009	1-410-988-11	INDUCTOR, CHIP 0.39uH	
L010	1-410-988-11	INDUCTOR, CHIP 0.39uH	
		< RESISTOR >	
R001	1-216-857-11	METAL CHIP 1M 5% 1/16W	
R002	1-216-823-11	METAL CHIP 1.5K 5% 1/16W	
R003	1-216-810-11	METAL CHIP 120 5% 1/16W	
R004	1-216-844-11	METAL CHIP 82K 5% 1/16W	
R005	1-216-823-11	METAL CHIP 1.5K 5% 1/16W	
R006	1-216-864-11	METAL CHIP 0	

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Ref. No.	Part No.	Description	Remark
	* A-7071-289-A	CN-6P BOARD, COMPLETE ********************* (Ref. No 3,000 Series)	
		< CONNECTOR >	
CN601	1-566-544-41	CONNECTOR, FPC (NON ZIF) 12P	
CN602	1-565-527-11	PIN, CONNECTOR (PC BOARD) 2P	
		< DIODE >	
D602	8-719-106-43	DIODE RD9.1M-B1	
D603	8-719-106-43	DIODE RD9.1M-B1	
D604	8-719-106-43	DIODE RD9.1M-B1	
D605	8-719-106-43	DIODE RD9.1M-B1	
D606	8-719-106-43	DIODE RD9.1M-B1	
D608	8-719-106-43	DIODE RD9.1M-B1	
		< JACK >	
J601	1-562-952-12	CONNECTOR 12P (CAMERA)	

Ref. No.	Part No.	Description	Remark
	* A-7071-288-A	DC-22P BOARD, COMPLETE ********************** (Ref. No 4,000 Series)	
	* 3-744-170-01	HOLDER, DC	
	3-746-959-01	SPACER, DC	
		< JACK >	
J702	1-537-241-11	TERMINAL BOARD (BATTERY)	
		< IC LINK >	
PS701 ⚠·	1-532-840-21	LINK, IC PRF1250 (1.25A)	
PS702 ⚠·	1-532-840-21	LINK, IC PRF1250 (1.25A)	
PS703 ⚠·	1-532-840-21	LINK, IC PRF1250 (1.25A)	
PS704 ⚠·	1-532-840-21	LINK, IC PRF1250 (1.25A)	
PS705 ⚠·	1-532-840-21	LINK, IC PRF1250 (1.25A)	
PS706 ⚠·	1-532-840-21	LINK, IC PRF1250 (1.25A)	
		< FLAT CABLE >	
W701	1-575-823-11	CABLE, FLAT (1.0MM PITCH) 16P	

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Ref. No.	Part No.	Description	Remark
	1-628-060-12	FP-89 FLEXIBLE BOARD ******************** (Ref. No 8,000 Series)	
	1-572-173-11	SWITCH, SLIDE (ENCODER)	
		< PHOTO COUPLER >	
D301	8-719-820-44	PHOTO COUPLER TLP907-0 (SONY2)	
		< SENSOR >	
Q301	8-729-906-48	SENSOR EE-TP109	
		< SWITCH >	
S901	1-571-099-11	SWITCH (CASSETTE DOWN)	

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Ref. No.	Part No.	Description	Remark
	1-628-061-12	FP-90 FLEXIBLE BOARD ******************** (Ref. No 8,000 Series)	
		< DIODE >	
D302	8-719-940-81	DIODE GL452S	
D303	8-719-820-44	PHOTO COUPLER TLP907-0 (SONY2)	

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
		< SENSOR >	
Q302	8-729-906-48	SENSOR EE-TP109	
		< SWITCH >	
S302	1-572-298-11	SWITCH PUSH (ME/MP, MP HG, REC PROOF)	
**************	**************	**	
*	A-7071-319-A	KB-10P BOARD, COMPLETE ********************** (Ref. No 4,000 Series)	
*	3-744-130-01	HOLDER (PC), LED	
		< CONNECTOR >	
CN802	1-566-760-11	PIN, CONNECTOR (PC BOARD) 5P	
		< DIODE >	
D801	8-719-970-40	DIODE GL-1EG101	
D803	8-719-918-65	DIODE GL1PR102	
D804	8-719-918-65	DIODE GL1PR102	
D808	8-719-951-22	DIODE IMN10	
D809	8-719-951-22	DIODE IMN10	
D810	8-719-104-34	DIODE 1S2836	
		< TRANSISTOR >	
Q801	8-729-403-24	TRANSISTOR XN4210	
Q802	8-729-403-24	TRANSISTOR XN4210	
Q803	8-729-403-24	TRANSISTOR XN4210	
		< RESISTOR >	
R801	1-216-033-00	METAL CHIP 220 5% 1/10W	
R803	1-216-037-00	METAL CHIP 330 5% 1/10W	
R804	1-216-037-00	METAL CHIP 330 5% 1/10W	
R808	1-216-075-00	METAL CHIP 12K 5% 1/10W	
		< SWITCH >	
S801	1-572-344-21	SWITCH, SLIDE (POWER)	
S802	1-572-078-11	SWITCH, TACTILE (CHANNEL -)	
S803	1-572-078-11	SWITCH, TACTILE (CHANNEL +)	
S805	1-571-102-11	SWITCH, SLIDE (EJECT)	
S806	1-572-078-11	SWITCH, TACTILE (REW)	
S807	1-572-078-11	SWITCH, TACTILE (FF)	
S808	1-572-078-11	SWITCH, TACTILE (PB)	
S809	1-572-078-11	SWITCH, TACTILE (STOP)	
S810	1-572-078-11	SWITCH, TACTILE (PAUSE)	
S811	1-571-102-11	SWITCH, SLIDE (REC)	
S812	1-572-078-11	SWITCH, TACTILE (SLOW)	

Ref. No.	Part No.	Description	Remark
*	A-7062-437-A	RG-22 BOARD, COMPLETE ********************* (Ref. No 2,000 Series)	
		< CAPACITOR >	
C001	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C002	1-135-151-21	TANTALUM CHIP 4.7uF 20% 4V	
C004	1-163-245-11	CERAMIC CHIP 56PF 5% 50V	
C005	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C006	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C007	1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V	
C008	1-135-157-21	TANTALUM CHIP 10uF 20% 6.3V	
C009	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C010	1-126-206-11	ELECT CHIP 100uF 20% 6.3V	
C011	1-164-634-11	CERAMIC CHIP 1uF 16V	
C012	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C013	1-163-103-00	CERAMIC CHIP 27PF 5% 50V	
C014	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C015	1-164-634-11	CERAMIC CHIP 1uF 16V	
C017	1-163-241-11	CERAMIC CHIP 39PF 5% 50V	
C018	1-163-241-11	CERAMIC CHIP 39PF 5% 50V	
C019	1-162-638-11	CERAMIC CHIP 1uF 16V	
C020	1-162-638-11	CERAMIC CHIP 1uF 16V	
C021	1-163-103-00	CERAMIC CHIP 27PF 5% 50V	
C022	1-135-076-21	TANTALUM CHIP 1uF 10% 35V	
C023	1-163-125-00	CERAMIC CHIP 220PF 5% 50V	
C025	1-163-103-00	CERAMIC CHIP 27PF 5% 50V	
C026	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C027	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C028	1-163-241-11	CERAMIC CHIP 39PF 5% 50V	
C029	1-135-162-21	TANTALUM CHIP 33uF 20% 6.3V	
C030	1-163-105-00	CERAMIC CHIP 33PF 5% 50V	
C031	1-162-638-11	CERAMIC CHIP 1uF 16V	
C032	1-162-638-11	CERAMIC CHIP 1uF 16V	
C034	1-163-103-00	CERAMIC CHIP 27PF 5% 50V	
C035	1-163-097-00	CERAMIC CHIP 15PF 5% 50V	
C036	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C037	1-163-115-00	CERAMIC CHIP 82PF 5% 50V	
C038	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C039	1-163-111-00	CERAMIC CHIP 56PF 5% 50V	
C040	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C041	1-163-109-00	CERAMIC CHIP 47PF 5% 50V	
C042	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C043	1-162-638-11	CERAMIC CHIP 1uF 16V	
C044	1-162-638-11	CERAMIC CHIP 1uF 16V	
C045	1-162-638-11	CERAMIC CHIP 1uF 16V	
C046	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C047	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C048	1-164-232-11	CERAMIC CHIP 0.01uF 50V	

Ref. No.	Part No.	Description			Remark
C049	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C050	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C051	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C052	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C053	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C054	1-135-156-21	TANTALUM CHIP	6.8uF	10%	6.3V
C055	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C056	1-135-156-21	TANTALUM CHIP	6.8uF	10%	6.3V
C057	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C058	1-126-199-11	ELECT CHIP	6.8uF	20%	35V
C059	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C060	1-126-199-11	ELECT CHIP	6.8uF	20%	35V
C061	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C062	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C063	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C064	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C065	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C066	1-126-204-11	ELECT CHIP	47uF	20%	16V
C067	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C068	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C069	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C070	1-164-634-11	CERAMIC CHIP	1uF		16V
C071	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C072	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C073	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C074	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C075	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C076	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C077	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C078	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C079	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C080	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C081	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C082	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C083	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C084	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C085	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C086	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C803	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C804	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C805	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C809	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN001	1-565-212-11	CONNECTOR, FPC (ZIF) 26P			
CN002	1-568-238-11	CONNECTOR, FPC (1.0MM) (ZIF) 16P			
CN501	1-568-235-21	CONNECTOR, FPC (1.0MM) (ZIF) 10P			
CN901	1-565-528-11	PIN, CONNECTOR (PC BOARD) 3P			

Ref. No.	Part No.	Description		Remark
		< TRIMMER >		
CV001	1-141-311-11	CAP, TRIMMER	20PF	
CV002	1-141-370-11	CAP, CHIP TRIMMER		
CV801	1-141-368-11	CAP, CHIP TRIMMER		
		< DIODE >		
D001	8-719-400-18	DIODE	MA152WK	
		< DELAY LINE >		
DL001	1-415-649-11	DELAY LINE, 1H (ULTRASONIC)		
		< FILTER >		
FL001	1-236-955-11	FILTER, LOW PASS (Y:PAL)		
		< IC >		
IC001	8-759-009-07	IC	MC14053BF	
IC002	8-759-635-37	IC	M52003AFP	
IC801	8-759-150-07	IC	uPD6451AGT-601	
		< COIL >		
L002	1-410-381-11	INDUCTOR CHIP	10uH	
L003	1-412-029-11	INDUCTOR CHIP	10uH	
L004	1-410-388-21	INDUCTOR CHIP	39uH	
L005	1-410-388-21	INDUCTOR CHIP	39uH	
L006	1-410-386-11	INDUCTOR CHIP	27uH	
L007	1-412-028-11	INDUCTOR CHIP	4.7uH	
L008	1-412-028-11	INDUCTOR CHIP	4.7uH	
L009	1-412-032-11	INDUCTOR CHIP	100uH	
L010	1-412-032-11	INDUCTOR CHIP	100uH	
L011	1-410-383-31	INDUCTOR CHIP	15uH	
L012	1-410-388-21	INDUCTOR CHIP	39uH	
L013	1-412-029-11	INDUCTOR CHIP	10uH	
L801	1-412-066-21	INDUCTOR CHIP	220uH	
L802	1-412-192-31	INDUCTOR	56uH	
		< TRANSISTOR >		
Q001	8-729-100-66	TRANSISTOR	2SC1623	
Q002	8-729-100-66	TRANSISTOR	2SC1623	
Q003	8-729-100-66	TRANSISTOR	2SC1623	
Q004	8-729-901-01	TRANSISTOR	DTC144EK	
Q005	8-729-901-01	TRANSISTOR	DTC144EK	
Q006	8-729-904-41	TRANSISTOR	FMY3	
Q007	8-729-904-44	TRANSISTOR	FMY4	
Q008	8-729-904-41	TRANSISTOR	FMY3	
Q009	8-729-904-44	TRANSISTOR	FMY4	
Q010	8-729-904-41	TRANSISTOR	FMY3	
Q011	8-729-904-44	TRANSISTOR	FMY4	

Ref. No.	Part No.	Description				Remark
Q012	8-729-901-03	TRANSISTOR	DTC144WK			
Q013	8-729-141-48	TRANSISTOR	2SB624-BV345			
Q014	8-729-901-01	TRANSISTOR	DTC144EK			
Q015	8-729-100-66	TRANSISTOR	2SC1623			
Q901	8-729-901-00	TRANSISTOR	DTC124EK			
Q902	8-729-901-05	TRANSISTOR	DTA124EK			

< RESISTOR >

Ref. No.	Part No.	Description				Remark
R001	1-216-748-11	METAL CHIP	39K	5%	1/10W	
R002	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R003	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R004	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R005	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R006	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R007	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R008	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R009	1-216-295-00	METAL CHIP	0	5%	1/10W	
R010	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R011	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R012	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R013	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R014	1-216-683-11	METAL CHIP	22K	0.5%	1/10W	
R015	1-216-689-11	METAL CHIP	39K	0.5%	1/10W	
R016	1-216-038-00	METAL CHIP	360	5%	1/10W	
R017	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R018	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R019	1-216-066-00	METAL CHIP	5.1K	5%	1/10W	
R020	1-216-047-00	METAL CHIP	820	5%	1/10W	
R021	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R023	1-216-047-00	METAL CHIP	820	5%	1/10W	
R024	1-216-043-00	METAL CHIP	560	5%	1/10W	
R025	1-216-104-00	METAL CHIP	200K	5%	1/10W	
R027	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R028	1-216-047-00	METAL CHIP	820	5%	1/10W	
R029	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R030	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R031	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R032	1-216-047-00	METAL CHIP	820	5%	1/10W	
R033	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R034	1-216-043-00	METAL CHIP	560	5%	1/10W	
R035	1-216-748-11	METAL CHIP	39K	5%	1/10W	
R036	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R037	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R038	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R039	1-216-295-00	METAL CHIP	0	5%	1/10W	
R040	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R041	1-216-295-00	METAL CHIP	0	5%	1/10W	
R043	1-216-295-00	METAL CHIP	0	5%	1/10W	
R044	1-216-295-00	METAL CHIP	0	5%	1/10W	
R045	1-216-542-11	METAL CHIP	12K	1%	1/10W	
R046	1-216-333-11	METAL CHIP	15K	1%	1/10W	
R047	1-216-295-00	METAL CHIP	0	5%	1/10W	
R048	1-216-295-00	METAL CHIP	0	5%	1/10W	
R049	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R050	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R051	1-216-748-11	METAL CHIP	39K	5%	1/10W	
R052	1-216-031-00	METAL CHIP	180	5%	1/10W	
R054	1-216-295-00	METAL CHIP	0	5%	1/10W	
R055	1-216-295-00	METAL CHIP	0	5%	1/10W	
R056	1-216-295-00	METAL CHIP	0	5%	1/10W	
R057	1-216-033-00	METAL CHIP	220	5%	1/10W	
R059	1-216-295-00	METAL CHIP	0	5%	1/10W	
R060	1-216-043-00	METAL CHIP	560	5%	1/10W	
R061	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R062	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R063	1-216-090-00	METAL CHIP	51K	5%	1/10W	
R064	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R065	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R066	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R067	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R068	1-216-033-00	METAL CHIP	220	5%	1/10W	
R069	1-216-332-11	METAL CHIP	11K	1%	1/10W	
R070	1-216-747-11	METAL CHIP	33K	1%	1/10W	
R072	1-216-101-00	METAL CHIP	150K	5%	1/10W	
R073	1-216-039-00	METAL CHIP	390	5%	1/10W	
R076	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R077	1-216-295-00	METAL CHIP	0	5%	1/10W	
R078	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R079	1-216-295-00	METAL CHIP	0	5%	1/10W	
R080	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R081	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R084	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R085	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R086	1-216-748-11	METAL CHIP	39K	5%	1/10W	
R087	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R501	1-216-095-00	METAL CHIP	82K	5%	1/10W	
R502	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R503	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R504	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R505	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R506	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R507	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R801	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R802	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R803	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R804	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R805	1-216-049-00	METAL CHIP	1K	5%	1/10W	

Ref. No.	Part No.	Description	Remark
R806	1-216-089-00	METAL CHIP 47K 5%	1/10W
R807	1-216-089-00	METAL CHIP 47K 5%	1/10W
R808	1-216-089-00	METAL CHIP 47K 5%	1/10W
R809	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
R810	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
R811	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
R812	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
R901	1-216-049-00	METAL CHIP 1K 5%	1/10W

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description	Remark
RV001	1-241-118-11	RES, VAR, CARBON 20K (COLOR)	
RV002	1-238-088-11	RES, ADJ CERMET 2.2K	
RV003	1-238-092-11	RES, ADJ CERMET 47K	
RV004	1-241-006-11	RES, VAR, CARBON 50K (BRIGHT)	
RV005	1-238-092-11	RES, ADJ CERMET 47K	
RV006	1-238-092-11	RES, ADJ CERMET 47K	
RV007	1-238-092-11	RES, ADJ CERMET 47K	
RV008	1-238-092-11	RES, ADJ CERMET 47K	
RV009	1-238-092-11	RES, ADJ CERMET 47K	
RV601	1-241-029-11	RES, VAR, CARBON 2K/2K (VOLUME)	

< SWITCH >

Ref. No.	Part No.	Description	Remark
SW601	1-570-386-21	SWITCH, SLIDE (NOT USED)	

< COIL >

Ref. No.	Part No.	Description	Remark
T001	1-459-949-11	COIL	

< CRYSTAL >

Ref. No.	Part No.	Description	Remark
X001	1-567-504-81	OSCILLATOR, CRYSTAL (4.43MHz)	

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* A-7062-433-A RP-105 BOARD, COMPLETE
****
(Ref. No 1,000 Series)

< CAPACITOR >

Ref. No.	Part No.	Description	Remark
C501	1-135-180-21	TANTALUM CHIP 3.3uF 20%	6.3V
C502	1-164-361-11	CERAMIC CHIP 0.047uF	16V
C503	1-135-161-21	TANTALUM CHIP 22uF 10%	6.3V
C504	1-164-361-11	CERAMIC CHIP 0.047uF	16V
C505	1-135-161-21	TANTALUM CHIP 22uF 10%	6.3V
C506	1-164-361-11	CERAMIC CHIP 0.047uF	16V
C507	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C508	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C509	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C510	1-164-633-11	CERAMIC CHIP 0.1uF 10%	25V
C511	1-164-633-11	CERAMIC CHIP 0.1uF 10%	25V
C512	1-164-633-11	CERAMIC CHIP 0.1uF 10%	25V
C513	1-164-633-11	CERAMIC CHIP 0.1uF 10%	25V
C514	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C515	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C516	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C517	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C518	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C519	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C520	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C522	1-135-161-21	TANTALUM CHIP 22uF 10%	6.3V
C523	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C524	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C525	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C529	1-164-361-11	CERAMIC CHIP 0.047uF	16V
C531	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C533	1-135-161-21	TANTALUM CHIP 22uF 10%	6.3V
C534	1-164-361-11	CERAMIC CHIP 0.047uF	16V
C535	1-135-157-21	TANTALUM CHIP 10uF 20%	6.3V
C581	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C582	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C583	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C584	1-162-953-11	CERAMIC CHIP 100PF 5%	50V
C585	1-162-953-11	CERAMIC CHIP 100PF 5%	50V
C586	1-162-955-11	CERAMIC CHIP 150PF 5%	50V
C587	1-162-953-11	CERAMIC CHIP 100PF 5%	50V

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
CN501	1-565-849-11	SOCKET, CONNECTOR 11P	
CN502	1-568-740-11	CONNECTOR, FPC (1.0MM) (ZIF) 18P	
CN503	1-568-340-41	CONNECTOR, BOARD TO BOARD 5P	

< IC >

Ref. No.	Part No.	Description	Remark
IC501	8-752-033-38	IC CXA1202R	

< COIL >

Ref. No.	Part No.	Description	Remark
L501	1-412-029-11	INDUCTOR, CHIP 10uH	
L502	1-412-033-11	INDUCTOR, CHIP 220uH	
L503	1-412-033-11	INDUCTOR, CHIP 220uH	
L581	1-412-198-11	INDUCTOR 220uH	
L582	1-412-137-11	INDUCTOR 10uH	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remark
Q501	8-729-905-12	TRANSISTOR DTA144EU	
Q502	8-729-905-35	TRANSISTOR 2SC4081-R	
Q581	8-729-905-23	TRANSISTOR 2SA1576-R	
Q582	8-729-820-76	TRANSISTOR 2SA1179-M5M6	

Ref. No.	Part No.	Description	Remark
		< RESISTOR >	
R501	1-216-837-11	METAL CHIP 22K 5%	1/16W
R502	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R503	1-216-838-11	METAL CHIP 27K 5%	1/16W
R504	1-216-838-11	METAL CHIP 27K 5%	1/16W
R505	1-216-838-11	METAL CHIP 27K 5%	1/16W
R506	1-216-838-11	METAL CHIP 27K 5%	1/16W
R507	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R508	1-216-837-11	METAL CHIP 22K 5%	1/16W
R509	1-216-839-11	METAL CHIP 33K 5%	1/16W
R510	1-216-838-11	METAL CHIP 27K 5%	1/16W
R512	1-216-841-11	METAL CHIP 47K 5%	1/16W
R514	1-216-841-11	METAL CHIP 47K 5%	1/16W
R515	1-216-837-11	METAL CHIP 22K 5%	1/16W
R516	1-216-841-11	METAL CHIP 47K 5%	1/16W
R517	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R520	1-216-791-11	METAL CHIP 3.3 5%	1/16W
R523	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R524	1-216-821-11	METAL CHIP 1K 5%	1/16W
R525	1-216-809-11	METAL CHIP 100 5%	1/16W
R526	1-216-809-11	METAL CHIP 100 5%	1/16W
R551	1-216-820-11	METAL CHIP 820 5%	1/16W
R552	1-216-824-11	METAL CHIP 1.8K 5%	1/16W
R553	1-216-864-11	METAL CHIP 0	
R554	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R581	1-216-840-11	METAL CHIP 39K 5%	1/16W
R582	1-216-839-11	METAL CHIP 33K 5%	1/16W
R583	1-216-810-11	METAL CHIP 120 5%	1/16W
R584	1-216-815-11	METAL CHIP 330 5%	1/16W
R585	1-216-794-11	METAL CHIP 5.6 5%	1/16W
R587	1-216-821-11	METAL CHIP 1K 5%	1/16W
		< VARIABLE RESISTOR >	
RV501	1-238-092-11	RES, ADJ CERMET47K	
RV502	1-238-092-11	RES, ADJ CERMET47K	

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* A-7071-318-A SB-3P BOARD, COMPLETE
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(Ref.No 6,000 Series)

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
CN901	1-566-539-11	CONNECTOR, FPC (NON ZIF) 7P	

Ref. No.	Part No.	Description	Remark
		< RESISTOR >	
R903	1-216-075-00	METAL CHIP 12K 5%	1/10W
R904	1-216-079-00	METAL CHIP 18K 5%	1/10W
R906	1-216-075-00	METAL CHIP 12K 5%	1/10W
R907	1-216-079-00	METAL CHIP 18K 5%	1/10W
R908	1-216-085-00	METAL CHIP 33K 5%	1/10W
		< SWITCH >	
S903	1-572-078-11	SWITCH, TACTILE (COLOR SYSTEM)	
S904	1-572-078-11	SWITCH, TACTILE (TV SYSTEM)	
S905	1-572-078-11	SWITCH, TACTILE (SP/LP)	
S906	1-572-078-11	SWITCH, TACTILE (CLEAR)	
S907	1-572-078-11	SWITCH, TACTILE (POSITION)	
S908	1-572-078-11	SWITCH, TACTILE (PRESET)	
S909	1-572-078-11	SWITCH, TACTILE (SEEK)	
S910	1-572-078-11	SWITCH, TACTILE (INPUT SELECT)	

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* A-7062-528-A SV-66 BOARD, COMPLETE
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(Ref.No 5,000 Series)
(Including the CC-55 BOARD)

Ref. No.	Part No.	Description	Remark
	1-634-993-11	FP-270 FLEXIBLE BOARD	
	* 3-746-902-01	CASE (LID), SHIELD, SDD	
	3-831-441-XX	CUSHION (5)	
	3-831-441-XX	CUSHION (5)	
		< CAPACITOR >	
C101	1-162-915-11	CERAMIC CHIP 10PF 0.5PF	50V
C102	1-162-945-11	CERAMIC CHIP 22PF 5%	50V
C103	1-162-945-11	CERAMIC CHIP 22PF 5%	50V
C104	1-162-945-11	CERAMIC CHIP 22PF 5%	50V
C105	1-162-945-11	CERAMIC CHIP 22PF 5%	50V
C106	1-162-945-11	CERAMIC CHIP 22PF 5%	50V
C107	1-162-945-11	CERAMIC CHIP 22PF 5%	50V
C108	1-162-945-11	CERAMIC CHIP 22PF 5%	50V
C109	1-162-945-11	CERAMIC CHIP 22PF 5%	50V
C110	1-162-945-11	CERAMIC CHIP 22PF 5%	50V
C111	1-162-945-11	CERAMIC CHIP 22PF 5%	50V
C112	1-162-945-11	CERAMIC CHIP 22PF 5%	50V
C113	1-162-945-11	CERAMIC CHIP 22PF 5%	50V
C114	1-162-945-11	CERAMIC CHIP 22PF 5%	50V
C115	1-162-945-11	CERAMIC CHIP 22PF 5%	50V
C116	1-162-945-11	CERAMIC CHIP 22PF 5%	50V
C117	1-162-945-11	CERAMIC CHIP 22PF 5%	50V
C118	1-162-945-11	CERAMIC CHIP 22PF 5%	50V
C119	1-162-945-11	CERAMIC CHIP 22PF 5%	50V
C120	1-162-945-11	CERAMIC CHIP 22PF 5%	50V

Ref. No.	Part No.	Description			Remark
C121	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C122	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C123	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C124	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C125	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C126	1-135-159-21	TANTALUM CHIP	10uF	10%	16V
C127	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C128	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C131	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C132	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C134	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C135	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C136	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C139	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C140	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C141	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C142	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C143	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C144	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C145	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C146	1-164-634-11	CERAMIC CHIP	1uF		16V
C201	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C202	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C203	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C204	1-164-634-11	CERAMIC CHIP	1uF		16V
C206	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C208	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C209	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C210	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C211	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C212	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C213	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C214	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C215	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C216	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C217	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C218	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C219	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C220	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C221	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C222	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C223	1-164-634-11	CERAMIC CHIP	1uF		16V
C224	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C226	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C228	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C229	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C230	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C231	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C232	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C233	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C234	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C235	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C236	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C237	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C238	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C239	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C240	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C241	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C242	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C243	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C244	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C245	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C246	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C247	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C248	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C249	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C250	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C251	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C252	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C253	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C254	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C255	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C256	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C257	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C258	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C259	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C260	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C261	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C262	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C263	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C265	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C266	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C267	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C268	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C269	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C270	1-164-634-11	CERAMIC CHIP	1uF		16V
C271	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C272	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C273	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C302	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C305	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C308	1-162-956-11	CERAMIC CHIP	180PF	5%	50V
C309	1-162-947-11	CERAMIC CHIP	33PF	5%	50V
C310	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C311	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C312	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C313	1-135-149-21	TANTALUM CHIP	2.2uF	20%	10V
C315	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

Ref. No.	Part No.	Description			Remark
C317	1-135-180-21	TANTALUM CHIP	3.3uF	20%	6.3V
C319	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C320	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C321	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C401	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C402	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C403	1-127-558-11	ELECT(SOLID)	10uF	20%	10V
C404	1-127-558-11	ELECT(SOLID)	10uF	20%	10V
C405	1-127-558-11	ELECT(SOLID)	10uF	20%	10V
C406	1-127-558-11	ELECT(SOLID)	10uF	20%	10V
C407	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C408	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C409	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C410	1-127-558-11	ELECT(SOLID)	10uF	20%	10V
C411	1-164-361-11	CERAMIC CHIP	0.047uF		16V
C412	1-127-558-11	ELECT(SOLID)	10uF	20%	10V
C413	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C414	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C415	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C416	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C417	1-164-361-11	CERAMIC CHIP	0.047uF		16V
C418	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C419	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C420	1-127-491-00	ELECT(SOLID)	22uF	20%	10V
C421	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C422	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C423	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C424	1-127-558-11	ELECT(SOLID)	10uF	20%	10V
C425	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C426	1-127-558-11	ELECT(SOLID)	10uF	20%	10V
C427	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C428	1-127-558-11	ELECT(SOLID)	10uF	20%	10V
C429	1-135-216-11	TANTALUM CHIP	10uF	20%	10V
C430	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C431	1-127-558-11	ELECT(SOLID)	10uF	20%	10V
C432	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C433	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C434	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C435	1-135-159-21	TANTALUM CHIP	10uF	10%	16V
C436	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C437	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C438	1-136-718-11	FILM CHIP	0.1uF	5%	25V
C439	1-164-330-21	CERAMIC CHIP	0.22uF	10%	16V
C440	1-164-330-21	CERAMIC CHIP	0.22uF	10%	16V
C441	1-164-330-21	CERAMIC CHIP	0.22uF	10%	16V
C442	1-164-634-11	CERAMIC CHIP	1uF		16V
C443	1-135-159-21	TANTALUM CHIP	10uF	10%	16V
C444	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C445	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C446	1-164-330-21	CERAMIC CHIP	0.22uF	10%	16V
C447	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C448	1-164-330-21	CERAMIC CHIP	0.22uF	10%	16V
C449	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C450	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C451	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C453	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C454	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C455	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C456	1-135-180-21	TANTALUM CHIP	3.3uF	20%	6.3V
C457	1-135-149-21	TANTALUM CHIP	2.2uF	20%	10V
C458	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C460	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C461	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C601	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C602	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C603	1-128-004-11	ELECT CHIP	10uF	20%	16V
C604	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C605	1-164-361-11	CERAMIC CHIP	0.047uF		16V
C607	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C608	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C609	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C610	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C611	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C612	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C613	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C614	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C615	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C616	1-128-004-11	ELECT CHIP	10uF	20%	16V
C617	1-135-180-21	TANTALUM CHIP	3.3uF	20%	6.3V
C618	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C619	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C620	1-135-180-21	TANTALUM CHIP	3.3uF	20%	6.3V
C621	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C622	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C623	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C624	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C625	1-135-177-21	TANTALUM CHIP	1uF	20%	20V
C626	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C627	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C628	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C629	1-135-177-21	TANTALUM CHIP	1uF	20%	20V
C630	1-126-607-11	ELECT CHIP	47uF	20%	4V
C631	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C632	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C633	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C634	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C635	1-162-955-11	CERAMIC CHIP	150PF	5%	50V

Ref. No.	Part No.	Description			Remark
C636	1-126-607-11	ELECT CHIP	47uF	20%	4V
C637	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C638	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C639	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C640	1-164-145-11	CERAMIC CHIP	390PF	5%	50V
C641	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C642	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C643	1-126-607-11	ELECT CHIP	47uF	20%	4V
C644	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C645	1-162-950-11	CERAMIC CHIP	56PF	5%	50V
C646	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C647	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C648	1-162-944-11	CERAMIC CHIP	18PF	5%	50V
C651	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C652	1-162-950-11	CERAMIC CHIP	56PF	5%	50V
C653	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C654	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C655	1-162-952-11	CERAMIC CHIP	82PF	5%	50V
C656	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
C657	1-126-607-11	ELECT CHIP	47uF	20%	4V
C658	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C659	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C660	1-162-950-11	CERAMIC CHIP	56PF	5%	50V
C661	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C662	1-162-944-11	CERAMIC CHIP	18PF	5%	50V
C663	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C664	1-126-607-11	ELECT CHIP	47uF	20%	4V
C665	1-128-004-11	ELECT CHIP	10uF	20%	16V
C666	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C701	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C702	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C703	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C704	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C705	1-128-004-11	ELECT CHIP	10uF	20%	16V
C706	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C707	1-126-607-11	ELECT CHIP	47uF	20%	4V
C710	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C711	1-135-177-21	TANTALUM CHIP	1uF	20%	20V
C712	1-135-177-21	TANTALUM CHIP	1uF	20%	20V
C713	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C714	1-135-146-21	TANTALUM CHIP	0.68uF	20%	25V
C715	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C716	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C717	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C718	1-162-936-11	CERAMIC CHIP	5PF	0.25PF	50V
C719	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C720	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C721	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C722	1-162-945-11	CERAMIC CHIP	22PF	5%	50V

Ref. No.	Part No.	Description			Remark
C723	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C724	1-162-952-11	CERAMIC CHIP	82PF	5%	50V
C725	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C726	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C727	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C728	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C729	1-162-950-11	CERAMIC CHIP	56PF	5%	50V
C730	1-162-951-11	CERAMIC CHIP	68PF	5%	50V
C731	1-162-954-11	CERAMIC CHIP	120PF	5%	50V
C732	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C733	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C734	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C735	1-164-217-11	CERAMIC CHIP	150PF	0.25PF	50V
C741	1-128-004-11	ELECT CHIP	10uF	20%	16V
C742	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C743	1-163-118-00	CERAMIC CHIP	110PF	5%	50V
C744	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C745	1-135-149-21	TANTALUM CHIP	2.2uF	20%	10V
C746	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C748	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C749	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C750	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C751	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C752	1-135-177-21	TANTALUM CHIP	1uF	20%	20V
C753	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C754	1-162-941-11	CERAMIC CHIP	10PF	0.5PF	50V
C755	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C756	1-162-936-11	CERAMIC CHIP	5PF	0.25PF	50V
C757	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C758	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C759	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C760	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C761	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C769	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C771	1-135-217-21	TANTALUM CHIP	15uF	20%	6.3V
C772	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C773	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C774	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C775	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C776	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C777	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C778	1-164-361-11	CERAMIC CHIP	0.047uF		16V
C779	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C780	1-135-177-21	TANTALUM CHIP	1uF	20%	20V
C781	1-126-246-11	ELECT CHIP	220uF	20%	4V
C782	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C783	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C784	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C785	1-135-201-11	TANTALUM CHIP	10uF	20%	4V

Ref. No.	Part No.	Description			Remark
C786	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C787	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C789	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C790	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C792	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C793	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C794	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C796	1-135-216-11	TANTALUM CHIP	10uF	20%	10V
C797	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C798	1-135-149-21	TANTALUM CHIP	2.2uF	20%	10V
C799	1-135-146-21	TANTALUM CHIP	0.68uF	20%	25V
C801	1-164-361-11	CERAMIC CHIP	0.047uF		16V
C803	1-162-947-11	CERAMIC CHIP	33PF	5%	50V
C804	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C805	1-162-958-11	CERAMIC CHIP	270PF	5%	50V
C806	1-162-943-11	CERAMIC CHIP	15PF	5%	50V
C807	1-162-950-11	CERAMIC CHIP	56PF	5%	50V
C809	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C813	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C815	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C816	1-162-956-11	CERAMIC CHIP	180PF	5%	50V
C817	1-162-976-11	CERAMIC CHIP	75PF	5%	50V
C826	1-164-634-11	CERAMIC CHIP	1uF		16V
C828	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C829	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C831	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C832	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C833	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C836	1-162-943-11	CERAMIC CHIP	15PF	5%	50V
C837	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C838	1-162-948-11	CERAMIC CHIP	39PF	5%	50V
C839	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C841	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C843	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C844	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C845	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C847	1-162-942-11	CERAMIC CHIP	12PF	5%	50V
C860	1-162-943-11	CERAMIC CHIP	15PF	5%	50V
C901	1-164-361-11	CERAMIC CHIP	0.047uF		16V
C902	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C911	1-164-634-11	CERAMIC CHIP	1uF		16V
C912	1-164-634-11	CERAMIC CHIP	1uF		16V
C999	1-164-005-11	CERAMIC CHIP	0.47uF		25V

Ref. No.	Part No.	Description		Remark
		< FILTER >		
CF701	1-577-162-11	FILTER, CERAMIC		
		< CONNECTOR >		
CN001	1-566-531-11	CONNECTOR, FPC (ZIF) 15P		
CN002	1-569-030-11	CONNECTOR, FPC (ZIF) 21P		
CN003	1-569-481-11	CONNECTOR, FPC 30P		
CN004	1-569-633-61	CONNECTOR, BOARD TO BOARD 26P		
CN005	1-569-631-41	CONNECTOR, BOARD TO BOARD 20P		
CN006	1-569-632-41	CONNECTOR, BOARD TO BOARD 22P		
CN007	1-566-532-11	CONNECTOR, FPC (ZIF) 16P		
CN008	1-569-363-21	CONNECTOR, FPC 15P		
CN009	1-566-531-11	CONNECTOR, FPC (ZIF) 15P		
CN601	1-566-095-11	PIN, BOARD TO BOARD 6P		
CN701	1-566-528-21	CONNECTOR, FPC (ZIF) 12P		
CN801	1-566-534-11	CONNECTOR, FPC (ZIF) 18P		
		< TRIMMER >		
CV101	1-141-424-11	CAP, ADJ		
		< DIODE >		
D101	8-719-938-72	DIODE	SB01-05CP	
D103	8-719-105-52	DIODE	RD3.6M-B2	
D104	8-719-105-XX	DIODE	RD6.2M-B1	
D107	8-719-941-09	DIODE	DAP202U	
D108	8-719-404-40	DIODE	MA121	
D109	8-719-941-09	DIODE	DAP202U	
D201	8-719-941-86	DIODE	DAN202U	
D202	8-719-404-40	DIODE	MA121	
D203	8-719-404-40	DIODE	MA121	
D204	8-719-941-09	DIODE	DAP202U	
D205	8-719-941-09	DIODE	DAP202U	
D206	8-719-941-09	DIODE	DAP202U	
D301	8-719-941-86	DIODE	DAN202U	
D401	8-719-938-78	DIODE	SB10-05PCP	
D402	8-719-941-09	DIODE	DAP202U	
D403	8-719-938-75	DIODE	SB05-05CP	
D404	8-719-938-75	DIODE	SB05-05CP	
D601	8-719-404-40	DIODE	MA121	
D701	8-719-941-86	DIODE	DAN202U	
D702	8-719-941-86	DIODE	DAN202U	
D741	8-719-941-86	DIODE	DAN202U	
D742	8-719-941-86	DIODE	DAN202U	
D771	8-719-404-40	DIODE	MA121	
D802	8-719-800-76	DIODE	1SS226	
D901	8-719-106-44	DIODE	RD9.1M-B2	
D902	8-719-106-44	DIODE	RD9.1M-B2	

Ref. No.	Part No.	Description	Remark
		< FERRITE BEAD >	
FB101	1-543-256-11	BEAD, FERRITE	
FB102	1-412-390-21	INDUCTOR, CHIP 0uH	
FB201	1-543-256-11	BEAD, FERRITE	
FB202	1-543-256-11	BEAD, FERRITE	
FB203	1-412-390-21	INDUCTOR, CHIP 0uH	
FB204	1-412-390-21	INDUCTOR, CHIP 0uH	
FB205	1-543-256-11	BEAD, FERRITE	
		< FILTER >	
FL651	1-236-848-21	FILTER, LOW PASS	
FL652	1-236-847-21	FILTER, LOW PASS	
FL653	1-236-751-21	FILTER, LOW PASS	
FL654	1-415-764-21	DELAY LINE, LC	
FL701	1-236-849-21	FILTER, BAND PASS	
FL702	1-236-186-11	FILTER, BAND PASS	
FL741	1-236-850-21	FILTER, BAND PASS	
		< IC >	
IC101	8-752-818-36	IC CXP50116-207Q	
IC102	8-759-502-36	IC S-81350HG	
IC103	8-759-940-33	IC S-8052ALO-LG-S	
IC104	8-759-946-03	IC S-8054ALR-LN-S	
IC105	8-759-720-23	IC AK93C57F	
IC107	8-759-209-15	IC TC4SU69F	
IC108	8-759-209-97	IC TC4S81F	
IC109	8-759-209-97	IC TC4S81F	
IC201	8-759-234-77	IC TC4S66F	
IC202	8-759-234-77	IC TC4S66F	
IC204	8-759-998-98	IC LM358D	
IC206	8-752-818-67	IC CXP80116-821Q	
IC301	1-809-200-11	AT F-HIC (PAL)	
IC302	8-759-100-97	IC uPC339G2	
IC401	⚠8-759-945-17	IC MB3775PF	
IC402	⚠8-759-998-94	IC LM311D	
IC403	8-759-990-55	IC CXA8006M	
IC404	8-759-805-06	IC CXA1127M	
IC405	8-759-107-68	IC CX20115A	
IC601	8-752-036-19	IC CXA1207R	
IC651	8-759-710-86	IC NJM2233BM	
IC701	8-752-036-20	IC CXA1208R	
IC741	8-759-605-61	IC CXA1203N	
IC771	8-752-033-40	IC CXA1201Q	
IC772	8-759-710-86	IC NJM2233BM	
IC773	8-759-234-77	IC TC4S66F	
IC774	8-759-234-77	IC TC4S66F	
IC775	8-759-234-77	IC TC4S66F	

Ref. No.	Part No.	Description	Remark
		< JACK >	
J101	1-563-282-11	JACK, SMALL TYPE (CONTROL S)	
J701	1-569-639-21	JACK, PIN 3P (VIDEO/AUDIO)	
		< COIL >	
L102	1-410-993-11	INDUCTOR, CHIP 1uH	
L103	1-410-993-11	INDUCTOR, CHIP 1uH	
L104	1-410-993-11	INDUCTOR, CHIP 1uH	
L105	1-410-993-11	INDUCTOR, CHIP 1uH	
L106	1-410-993-11	INDUCTOR, CHIP 1uH	
L107	1-410-993-11	INDUCTOR, CHIP 1uH	
L201	1-408-789-21	INDUCTOR, CHIP 100uH	
L203	1-410-993-11	INDUCTOR, CHIP 1uH	
L204	1-410-993-11	INDUCTOR, CHIP 1uH	
L205	1-410-993-11	INDUCTOR, CHIP 1uH	
L206	1-410-993-11	INDUCTOR, CHIP 1uH	
L207	1-410-993-11	INDUCTOR, CHIP 1uH	
L208	1-410-993-11	INDUCTOR, CHIP 1uH	
L209	1-410-993-11	INDUCTOR, CHIP 1uH	
L210	1-410-993-11	INDUCTOR, CHIP 1uH	
L211	1-410-993-11	INDUCTOR, CHIP 1uH	
L401	1-424-104-11	COIL, CHOKE 10uH	
L402	1-410-337-11	INDUCTOR 1uH	
L403	1-424-104-11	COIL, CHOKE 10uH	
L404	1-424-104-11	COIL, CHOKE 10uH	
L405	1-424-106-11	COIL, CHOKE 47uH	
L406	1-424-104-11	COIL, CHOKE 10uH	
L407	1-424-106-11	COIL, CHOKE 47uH	
L408	1-424-105-11	COIL, CHOKE 22uH	
L409	1-408-789-21	INDUCTOR CHIP 100uH	
L601	1-412-029-11	INDUCTOR CHIP 10uH	
L602	1-412-032-11	INDUCTOR CHIP 100uH	
L603	1-410-379-31	INDUCTOR CHIP 6.8uH	
L604	1-410-390-11	INDUCTOR CHIP 56uH	
L605	1-410-391-11	INDUCTOR CHIP 68uH	
L651	1-410-388-21	INDUCTOR CHIP 39uH	
L652	1-410-390-11	INDUCTOR CHIP 56uH	
L653	1-410-391-11	INDUCTOR CHIP 68uH	
L702	1-410-386-11	INDUCTOR CHIP 27uH	
L703	1-410-393-11	INDUCTOR CHIP 100uH	
L704	1-410-379-31	INDUCTOR CHIP 6.8uH	
L705	1-410-393-11	INDUCTOR CHIP 100uH	
L706	1-410-656-11	INDUCTOR CHIP 150uH	
L707	1-410-655-31	INDUCTOR CHIP 120uH	
L708	1-410-393-11	INDUCTOR CHIP 100uH	
L709	1-412-031-11	INDUCTOR CHIP 47uH	
L741	1-412-031-11	INDUCTOR CHIP 47uH	
L771	1-412-029-11	INDUCTOR CHIP 10uH	

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Ref. No.	Part No.	Description	Remark
L772	1-412-032-11	INDUCTOR CHIP 100uH	
L773	1-412-032-11	INDUCTOR CHIP 100uH	
L801	1-410-167-41	INDUCTOR CHIP 820uH	
L802	1-410-657-21	INDUCTOR CHIP 180uH	
L803	1-412-032-11	INDUCTOR CHIP 100uH	
L804	1-412-032-11	INDUCTOR CHIP 100uH	
L808	1-410-386-11	INDUCTOR CHIP 27uH	
L809	1-410-381-11	INDUCTOR CHIP 10uH	
L810	1-410-386-11	INDUCTOR CHIP 27uH	
L811	1-410-380-31	INDUCTOR CHIP 8.2uH	
L812	1-412-280-31	INDUCTOR 330uH	
L813	1-410-386-11	INDUCTOR CHIP 27uH	
L815	1-412-280-31	INDUCTOR 330uH	
L816	1-410-655-31	INDUCTOR CHIP 120uH	
L901	1-412-032-11	INDUCTOR CHIP 100uH	
		< IC LINK >	
PS101 ⚠·	1-532-605-00	LINK, IC ICP-N10 (0.4A)	
PS201 ⚠·	1-532-605-00	LINK, IC ICP-N10 (0.4A)	
		< TRANSISTOR >	
Q101	8-729-905-18	TRANSISTOR DTC144EU	
Q102	8-729-905-35	TRANSISTOR 2SC4081-R	
Q103	8-729-220-93	TRANSISTOR 2SK209-G	
Q104	8-729-905-18	TRANSISTOR DTC144EU	
Q105	8-729-905-35	TRANSISTOR 2SC4081-R	
Q106	8-729-905-23	TRANSISTOR 2SA1576-R	
Q107	8-729-220-93	TRANSISTOR 2SK209-G	
Q108	8-729-220-93	TRANSISTOR 2SK209-G	
Q109	8-729-905-12	TRANSISTOR DTA144EU	
Q110	8-729-905-35	TRANSISTOR 2SC4081-R	
Q111	8-729-905-23	TRANSISTOR 2SA1576-R	
Q112	8-729-905-23	TRANSISTOR 2SA1576-R	
Q113	8-729-921-08	TRANSISTOR DTC144TU	
Q114	8-729-403-24	TRANSISTOR XN4210	
Q116	8-729-403-24	TRANSISTOR XN4210	
Q118	8-729-920-59	TRANSISTOR IMX2	
Q120	8-729-905-35	TRANSISTOR 2SC4081-R	
Q201	8-729-905-35	TRANSISTOR 2SC4081-R	
Q202	8-729-905-35	TRANSISTOR 2SC4081-R	
Q203	8-729-921-08	TRANSISTOR DTC144TU	
Q204	8-729-902-96	TRANSISTOR FMS1	
Q205	8-729-903-82	TRANSISTOR FMW2	
Q206	8-729-907-00	TRANSISTOR DTC114EU	
Q207	8-729-905-35	TRANSISTOR 2SC4081-R	
Q208	8-729-820-46	TRANSISTOR 2SB1202FAS	
Q209	8-729-905-35	TRANSISTOR 2SC4081-R	
Q210	8-729-403-24	TRANSISTOR XN4210	
Q212	8-729-905-12	TRANSISTOR DTA144EU	
Q213	8-729-905-18	TRANSISTOR DTC144EU	
Q214	8-729-905-18	TRANSISTOR DTC144EU	
Q215	8-729-905-18	TRANSISTOR DTC144EU	
Q216	8-729-905-35	TRANSISTOR 2SC4081-R	
Q301	8-729-905-23	TRANSISTOR 2SA1576-R	
Q302	8-729-905-35	TRANSISTOR 2SC4081-R	
Q303	8-729-905-23	TRANSISTOR 2SA1576-R	
Q304	8-729-905-35	TRANSISTOR 2SC4081-R	
Q305	8-729-905-18	TRANSISTOR DTC144EU	
Q306	8-729-905-18	TRANSISTOR DTC144EU	
Q307	8-729-920-48	TRANSISTOR IMH2	
Q401	8-729-905-35	TRANSISTOR 2SC4081-R	
Q402	8-729-901-04	TRANSISTOR DTA114EK	
Q403	8-729-905-35	TRANSISTOR 2SC4081-R	
Q404	⚠8-729-805-27	TRANSISTOR 2SB1121-U	
Q405	8-729-905-35	TRANSISTOR 2SC4081-R	
Q406	8-729-905-61	TRANSISTOR DTC124EU	
Q407	8-729-905-35	TRANSISTOR 2SC4081-R	
Q408	⚠8-729-805-27	TRANSISTOR 2SB1121-U	
Q409	⚠8-729-805-27	TRANSISTOR 2SB1121-U	
Q410	8-729-805-27	TRANSISTOR 2SB1121-U	
Q411	8-729-805-27	TRANSISTOR 2SB1121-U	
Q412	8-729-905-35	TRANSISTOR 2SC4081-R	
Q413	8-729-907-00	TRANSISTOR DTC114EU	
Q415	8-729-905-18	TRANSISTOR DTC144EU	
Q416	8-729-905-12	TRANSISTOR DTA144EU	
Q418	8-729-141-48	TRANSISTOR 2SB624-BV345	
Q419	8-729-907-00	TRANSISTOR DTC114EU	
Q420	8-729-907-00	TRANSISTOR DTC114EU	
Q601	8-729-905-12	TRANSISTOR DTA144EU	
Q602	8-729-905-35	TRANSISTOR 2SC4081-R	
Q603	8-729-905-35	TRANSISTOR 2SC4081-R	
Q604	8-729-905-35	TRANSISTOR 2SC4081-R	
Q605	8-729-905-23	TRANSISTOR 2SA1576-R	
Q609	8-729-905-18	TRANSISTOR DTC144EU	
Q651	8-729-905-23	TRANSISTOR 2SA1576-R	
Q652	8-729-905-35	TRANSISTOR 2SC4081-R	
Q653	8-729-905-35	TRANSISTOR 2SC4081-R	
Q654	8-729-905-23	TRANSISTOR 2SA1576-R	
Q655	8-729-905-35	TRANSISTOR 2SC4081-R	
Q656	8-729-905-35	TRANSISTOR 2SC4081-R	
Q657	8-729-905-23	TRANSISTOR 2SA1576-R	
Q658	8-729-905-35	TRANSISTOR 2SC4081-R	

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Ref. No.	Part No.	Description		Remark
Q659	8-729-905-35	TRANSISTOR	2SC4081-R	
Q660	8-729-905-23	TRANSISTOR	2SA1576-R	
Q661	8-729-905-12	TRANSISTOR	DTA144EU	
Q662	8-729-905-18	TRANSISTOR	DTC144EU	
Q663	8-729-920-48	TRANSISTOR	IMH2	
Q665	8-729-905-35	TRANSISTOR	2SC4081-R	
Q693	8-729-141-48	TRANSISTOR	2SB624-BV345	
Q694	8-729-905-61	TRANSISTOR	DTC124EU	
Q701	8-729-905-35	TRANSISTOR	2SC4081-R	
Q702	8-729-905-18	TRANSISTOR	DTC144EU	
Q703	8-729-905-35	TRANSISTOR	2SC4081-R	
Q704	8-729-905-18	TRANSISTOR	DTC144EU	
Q705	8-729-905-35	TRANSISTOR	2SC4081-R	
Q706	8-729-905-23	TRANSISTOR	2SA1576-R	
Q707	8-729-905-35	TRANSISTOR	2SC4081-R	
Q709	8-729-905-18	TRANSISTOR	DTC144EU	
Q741	8-729-905-18	TRANSISTOR	DTC144EU	
Q743	8-729-905-12	TRANSISTOR	DTA144EU	
Q744	8-729-907-39	TRANSISTOR	IMD2	
Q745	8-729-920-48	TRANSISTOR	IMH2	
Q746	8-729-905-35	TRANSISTOR	2SC4081-R	
Q747	8-729-905-35	TRANSISTOR	2SC4081-R	
Q748	8-729-905-18	TRANSISTOR	DTC144EU	
Q749	8-729-102-07	TRANSISTOR	2SC2223-F13	
Q750	8-729-905-35	TRANSISTOR	2SC4081-R	
Q751	8-729-905-35	TRANSISTOR	2SC4081-R	
Q771	8-729-907-00	TRANSISTOR	DTC114EU	
Q772	8-729-905-12	TRANSISTOR	DTA144EU	
Q773	8-729-905-18	TRANSISTOR	DTC144EU	
Q774	8-729-905-18	TRANSISTOR	DTC144EU	
Q775	8-729-905-35	TRANSISTOR	2SC4081-R	
Q776	8-729-905-18	TRANSISTOR	DTC144EU	
Q777	8-729-905-23	TRANSISTOR	2SA1576-R	
Q778	8-729-905-18	TRANSISTOR	DTC144EU	
Q779	8-729-905-35	TRANSISTOR	2SC4081-R	
Q780	8-729-141-48	TRANSISTOR	2SB624-BV345	
Q781	8-729-905-18	TRANSISTOR	DTC144EU	
Q782	8-729-905-35	TRANSISTOR	2SC4081-R	
Q783	8-729-905-18	TRANSISTOR	DTC144EU	
Q804	8-729-905-35	TRANSISTOR	2SC4081-R	
Q806	8-729-905-12	TRANSISTOR	DTA144EU	
Q808	8-729-905-35	TRANSISTOR	2SC4081-R	
Q809	8-729-905-23	TRANSISTOR	2SA1576-R	
Q812	8-729-905-35	TRANSISTOR	2SC4081-R	
Q813	8-729-905-18	TRANSISTOR	DTC144EU	
Q814	8-729-141-48	TRANSISTOR	2SB624-BV345	
Q815	8-729-905-35	TRANSISTOR	2SC4081-R	
Q816	8-729-905-18	TRANSISTOR	DTC144EU	
Q818	8-752-822-52	TRANSISTOR	2SK1469-TL	

Ref. No.	Part No.	Description				Remark
Q819	8-729-141-48	TRANSISTOR	2SB624-BV345			
Q820	8-729-905-18	TRANSISTOR	DTC144EU			
Q822	8-729-905-35	TRANSISTOR	2SC4081-R			
Q823	8-729-905-23	TRANSISTOR	2SA1576-R			
Q824	8-729-905-35	TRANSISTOR	2SC4081-R			
Q831	8-729-920-48	TRANSISTOR	IMH2			
		< RESISTOR >				
R101	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R102	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R103	1-216-851-11	METAL CHIP	330K	5%	1/16W	
R104	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R105	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R106	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R107	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R108	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R109	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R110	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R112	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R113	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R114	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R115	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R118	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R127	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R130	1-216-861-11	METAL CHIP	2.2M	5%	1/16W	
R131	1-216-834-11	METAL CHIP	12K	5%	1/16W	
R132	1-216-861-11	METAL CHIP	2.2M	5%	1/16W	
R133	1-216-861-11	METAL CHIP	2.2M	5%	1/16W	
R135	1-216-839-11	METAL CHIP	33K	5%	1/16W	
R136	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R137	1-216-843-11	METAL CHIP	68K	5%	1/16W	
R138	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R139	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R140	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R141	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R144	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R145	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R146	1-216-822-11	METAL CHIP	1.2K	5%	1/16W	
R147	1-216-025-00	METAL CHIP	100	5%	1/10W	
R155	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R156	1-216-834-11	METAL CHIP	12K	5%	1/16W	
R157	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R158	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R159	1-216-834-11	METAL CHIP	12K	5%	1/16W	
R160	1-216-834-11	METAL CHIP	12K	5%	1/16W	
R161	1-216-834-11	METAL CHIP	12K	5%	1/16W	
R162	1-216-834-11	METAL CHIP	12K	5%	1/16W	
R163	1-216-834-11	METAL CHIP	12K	5%	1/16W	
R164	1-216-834-11	METAL CHIP	12K	5%	1/16W	

Ref.No.	Part No.	Description			Remark
R165	1-216-834-11	METAL CHIP	12K	5%	1/16W
R166	1-216-834-11	METAL CHIP	12K	5%	1/16W
R167	1-216-834-11	METAL CHIP	12K	5%	1/16W
R168	1-216-834-11	METAL CHIP	12K	5%	1/16W
R169	1-216-834-11	METAL CHIP	12K	5%	1/16W
R170	1-216-834-11	METAL CHIP	12K	5%	1/16W
R171	1-216-834-11	METAL CHIP	12K	5%	1/16W
R172	1-216-833-11	METAL CHIP	10K	5%	1/16W
R173	1-216-833-11	METAL CHIP	10K	5%	1/16W
R174	1-216-841-11	METAL CHIP	47K	5%	1/16W
R175	1-216-833-11	METAL CHIP	10K	5%	1/16W
R179	1-216-833-11	METAL CHIP	10K	5%	1/16W
R183	1-216-864-11	METAL CHIP	0		
R185	1-216-864-11	METAL CHIP	0		
R187	1-216-864-11	METAL CHIP	0		
R189	1-216-864-11	METAL CHIP	0		
R191	1-216-857-11	METAL CHIP	1M	5%	1/16W
R193	1-216-864-11	METAL CHIP	0		
R194	1-216-845-11	METAL CHIP	100K	5%	1/16W
R195	1-216-857-11	METAL CHIP	1M	5%	1/16W
R196	1-216-815-11	METAL CHIP	330	5%	1/16W
R197	1-216-838-11	METAL CHIP	27K	5%	1/16W
R198	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R201	1-216-845-11	METAL CHIP	100K	5%	1/16W
R202	1-216-833-11	METAL CHIP	10K	5%	1/16W
R203	1-216-845-11	METAL CHIP	100K	5%	1/16W
R204	1-216-833-11	METAL CHIP	10K	5%	1/16W
R205	1-216-838-11	METAL CHIP	27K	5%	1/16W
R206	1-216-857-11	METAL CHIP	1M	5%	1/16W
R207	1-216-851-11	METAL CHIP	330K	5%	1/16W
R208	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R209	1-216-838-11	METAL CHIP	27K	5%	1/16W
R210	1-216-843-11	METAL CHIP	68K	5%	1/16W
R211	1-216-843-11	METAL CHIP	68K	5%	1/16W
R212	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R213	1-216-192-00	METAL CHIP	560	5%	1/8W
R214	1-216-172-00	METAL CHIP	82	5%	1/8W
R215	1-216-835-11	METAL CHIP	15K	5%	1/16W
R216	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R217	1-216-821-11	METAL CHIP	1K	5%	1/16W
R218	1-216-857-11	METAL CHIP	1M	5%	1/16W
R219	1-216-845-11	METAL CHIP	100K	5%	1/16W
R220	1-216-845-11	METAL CHIP	100K	5%	1/16W
R221	1-216-845-11	METAL CHIP	100K	5%	1/16W
R222	1-216-853-11	METAL CHIP	470K	5%	1/16W
R223	1-216-853-11	METAL CHIP	470K	5%	1/16W
R224	1-216-845-11	METAL CHIP	100K	5%	1/16W
R225	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R226	1-216-830-11	METAL CHIP	5.6K	5%	1/16W

Ref.No.	Part No.	Description			Remark
R227	1-216-833-11	METAL CHIP	10K	5%	1/16W
R228	1-216-821-11	METAL CHIP	1K	5%	1/16W
R229	1-216-833-11	METAL CHIP	10K	5%	1/16W
R230	1-216-833-11	METAL CHIP	10K	5%	1/16W
R231	1-216-833-11	METAL CHIP	10K	5%	1/16W
R232	1-216-842-11	METAL CHIP	56K	5%	1/16W
R233	1-216-833-11	METAL CHIP	10K	5%	1/16W
R235	1-216-833-11	METAL CHIP	10K	5%	1/16W
R236	1-216-833-11	METAL CHIP	10K	5%	1/16W
R237	1-216-845-11	METAL CHIP	100K	5%	1/16W
R238	1-216-845-11	METAL CHIP	100K	5%	1/16W
R239	1-216-833-11	METAL CHIP	10K	5%	1/16W
R241	1-216-336-11	METAL CHIP	47K	1%	1/10W
R242	1-216-336-11	METAL CHIP	47K	1%	1/10W
R250	1-216-845-11	METAL CHIP	100K	5%	1/16W
R251	1-216-845-11	METAL CHIP	100K	5%	1/16W
R252	1-216-833-11	METAL CHIP	10K	5%	1/16W
R253	1-216-833-11	METAL CHIP	10K	5%	1/16W
R262	1-216-833-11	METAL CHIP	10K	5%	1/16W
R264	1-216-821-11	METAL CHIP	1K	5%	1/16W
R265	1-216-821-11	METAL CHIP	1K	5%	1/16W
R267	1-216-833-11	METAL CHIP	10K	5%	1/16W
R268	1-216-845-11	METAL CHIP	100K	5%	1/16W
R269	1-216-845-11	METAL CHIP	100K	5%	1/16W
R270	1-216-194-00	METAL CHIP	680	5%	1/8W
R271	1-216-194-00	METAL CHIP	680	5%	1/8W
R272	1-216-194-00	METAL CHIP	680	5%	1/8W
R273	1-216-845-11	METAL CHIP	100K	5%	1/16W
R274	1-216-845-11	METAL CHIP	100K	5%	1/16W
R275	1-216-845-11	METAL CHIP	100K	5%	1/16W
R276	1-216-845-11	METAL CHIP	100K	5%	1/16W
R277	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R278	1-216-864-11	METAL CHIP	0		
R279	1-216-833-11	METAL CHIP	10K	5%	1/16W
R280	1-216-821-11	METAL CHIP	1K	5%	1/16W
R281	1-216-833-11	METAL CHIP	10K	5%	1/16W
R282	1-216-833-11	METAL CHIP	10K	5%	1/16W
R283	1-216-821-11	METAL CHIP	1K	5%	1/16W
R284	1-216-865-11	METAL CHIP	3K	5%	1/16W
R299	1-216-833-11	METAL CHIP	10K	5%	1/16W
R301	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R302	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R303	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R304	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R305	1-216-854-11	METAL CHIP	560K	5%	1/16W
R306	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R307	1-216-833-11	METAL CHIP	10K	5%	1/16W
R308	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R309	1-216-825-11	METAL CHIP	2.2K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R312	1-216-833-11	METAL CHIP	10K	5%	1/16W
R313	1-216-847-11	METAL CHIP	150K	5%	1/16W
R314	1-216-833-11	METAL CHIP	10K	5%	1/16W
R316	1-216-839-11	METAL CHIP	33K	5%	1/16W
R317	1-216-833-11	METAL CHIP	10K	5%	1/16W
R318	1-216-821-11	METAL CHIP	1K	5%	1/16W
R319	1-216-809-11	METAL CHIP	100	5%	1/16W
R320	1-216-811-11	METAL CHIP	150	5%	1/16W
R321	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R322	1-216-838-11	METAL CHIP	27K	5%	1/16W
R323	1-216-857-11	METAL CHIP	1M	5%	1/16W
R325	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R326	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R327	1-216-857-11	METAL CHIP	1M	5%	1/16W
R328	1-216-833-11	METAL CHIP	10K	5%	1/16W
R329	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R330	1-216-833-11	METAL CHIP	10K	5%	1/16W
R331	1-216-833-11	METAL CHIP	10K	5%	1/16W
R332	1-216-833-11	METAL CHIP	10K	5%	1/16W
R334	1-216-833-11	METAL CHIP	10K	5%	1/16W
R342	1-216-833-11	METAL CHIP	10K	5%	1/16W
R401	1-216-845-11	METAL CHIP	100K	5%	1/16W
R402	1-216-833-11	METAL CHIP	10K	5%	1/16W
R403	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R404	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R405	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R407	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R408	1-216-836-11	METAL CHIP	18K	5%	1/16W
R409	1-216-033-00	METAL CHIP	220	5%	1/10W
R410	1-216-033-00	METAL CHIP	220	5%	1/10W
R411	1-216-045-00	METAL CHIP	680	5%	1/10W
R412	1-216-841-11	METAL CHIP	47K	5%	1/16W
R413	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R414	1-216-841-11	METAL CHIP	47K	5%	1/16W
R415	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R416	1-216-045-00	METAL CHIP	680	5%	1/10W
R417	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R418	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R419	1-216-045-00	METAL CHIP	680	5%	1/10W
R420	1-216-841-11	METAL CHIP	47K	5%	1/16W
R421	1-216-833-11	METAL CHIP	10K	5%	1/16W
R422	1-216-833-11	METAL CHIP	10K	5%	1/16W
R423	1-216-819-11	METAL CHIP	680	5%	1/16W
R424	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R425	1-216-845-11	METAL CHIP	100K	5%	1/16W
R426	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R427	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R428	1-216-837-11	METAL CHIP	22K	5%	1/16W
R429	1-216-845-11	METAL CHIP	100K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R430	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R431	1-216-789-11	METAL CHIP	2.2	5%	1/16W
R432	1-216-789-11	METAL CHIP	2.2	5%	1/16W
R433	1-216-845-11	METAL CHIP	100K	5%	1/16W
R434	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R435	1-216-789-11	METAL CHIP	2.2	5%	1/16W
R436	1-216-815-11	METAL CHIP	330	5%	1/16W
R437	1-216-833-11	METAL CHIP	10K	5%	1/16W
R438	1-216-838-11	METAL CHIP	27K	5%	1/16W
R439	1-216-838-11	METAL CHIP	27K	5%	1/16W
R440	1-216-838-11	METAL CHIP	27K	5%	1/16W
R441	1-216-833-11	METAL CHIP	10K	5%	1/16W
R443	1-216-836-11	METAL CHIP	18K	5%	1/16W
R444	1-216-848-11	METAL CHIP	180K	5%	1/16W
R445	1-216-821-11	METAL CHIP	1K	5%	1/16W
R446	1-216-848-11	METAL CHIP	180K	5%	1/16W
R447	1-216-833-11	METAL CHIP	10K	5%	1/16W
R448	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R450	1-216-864-11	METAL CHIP	0		
R451	1-216-836-11	METAL CHIP	18K	5%	1/16W
R452	1-216-839-11	METAL CHIP	33K	5%	1/16W
R453	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R454	1-216-841-11	METAL CHIP	47K	5%	1/16W
R455	1-216-845-11	METAL CHIP	100K	5%	1/16W
R456	1-216-801-11	METAL CHIP	22	5%	1/16W
R460	1-217-671-11	METAL CHIP	1	5%	1/10W
R461	1-217-671-11	METAL CHIP	1	5%	1/10W
R462	1-217-671-11	METAL CHIP	1	5%	1/10W
R463	1-217-671-11	METAL CHIP	1	5%	1/10W
R464	1-216-833-11	METAL CHIP	10K	5%	1/16W
R466	1-216-837-11	METAL CHIP	22K	5%	1/16W
R467	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R468	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R469	1-216-833-11	METAL CHIP	10K	5%	1/16W
R470	1-216-815-11	METAL CHIP	330	5%	1/16W
R471	1-216-839-11	METAL CHIP	33K	5%	1/16W
R601	1-216-821-11	METAL CHIP	1K	5%	1/16W
R602	1-216-821-11	METAL CHIP	1K	5%	1/16W
R603	1-216-838-11	METAL CHIP	27K	5%	1/16W
R604	1-216-857-11	METAL CHIP	1M	5%	1/16W
R605	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R606	1-216-845-11	METAL CHIP	100K	5%	1/16W
R607	1-216-821-11	METAL CHIP	1K	5%	1/16W
R608	1-216-821-11	METAL CHIP	1K	5%	1/16W
R609	1-216-845-11	METAL CHIP	100K	5%	1/16W
R610	1-216-861-11	METAL CHIP	2.2M	5%	1/16W
R611	1-216-849-11	METAL CHIP	220K	5%	1/16W
R612	1-218-349-11	METAL CHIP	240K	5%	1/16W

Ref. No.	Part No.	Description	Remark
R614	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R615	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R616	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R617	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R618	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R619	1-216-832-11	METAL CHIP 8.2K 5% 1/16W	
R620	1-216-832-11	METAL CHIP 8.2K 5% 1/16W	
R621	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R622	1-216-822-11	METAL CHIP 1.2K 5% 1/16W	
R623	1-216-817-11	METAL CHIP 470 5% 1/16W	
R624	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R629	1-216-811-11	METAL CHIP 150 5% 1/16W	
R630	1-216-813-11	METAL CHIP 220 5% 1/16W	
R631	1-216-815-11	METAL CHIP 330 5% 1/16W	
R632	1-216-801-11	METAL CHIP 22 5% 1/16W	
R633	1-216-820-11	METAL CHIP 820 5% 1/16W	
R634	1-216-819-11	METAL CHIP 680 5% 1/16W	
R635	1-216-830-11	METAL CHIP 5.6K 5% 1/16W	
R636	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R637	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R638	1-216-817-11	METAL CHIP 470 5% 1/16W	
R639	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R640	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R641	1-216-830-11	METAL CHIP 5.6K 5% 1/16W	
R651	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R652	1-216-842-11	METAL CHIP 56K 5% 1/16W	
R653	1-216-817-11	METAL CHIP 470 5% 1/16W	
R654	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R655	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R656	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R657	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R658	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R659	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R660	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R661	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R662	1-216-842-11	METAL CHIP 56K 5% 1/16W	
R663	1-216-817-11	METAL CHIP 470 5% 1/16W	
R664	1-216-809-11	METAL CHIP 100 5% 1/16W	
R665	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R666	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R667	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R668	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R669	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R670	1-216-822-11	METAL CHIP 1.2K 5% 1/16W	
R671	1-216-830-11	METAL CHIP 5.6K 5% 1/16W	
R672	1-216-819-11	METAL CHIP 680 5% 1/16W	
R673	1-216-819-11	METAL CHIP 680 5% 1/16W	
R674	1-216-813-11	METAL CHIP 220 5% 1/16W	
R675	1-216-816-11	METAL CHIP 390 5% 1/16W	

Ref. No.	Part No.	Description	Remark
R676	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R677	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R678	1-216-815-11	METAL CHIP 330 5% 1/16W	
R679	1-216-809-11	METAL CHIP 100 5% 1/16W	
R680	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R681	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R682	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R683	1-216-831-11	METAL CHIP 6.8K 5% 1/16W	
R684	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R685	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R686	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R687	1-216-816-11	METAL CHIP 390 5% 1/16W	
R688	1-216-813-11	METAL CHIP 220 5% 1/16W	
R690	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R693	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R694	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R701	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R702	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R703	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R705	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R706	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R707	1-216-830-11	METAL CHIP 5.6K 5% 1/16W	
R708	1-216-830-11	METAL CHIP 5.6K 5% 1/16W	
R709	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R710	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R711	1-216-830-11	METAL CHIP 5.6K 5% 1/16W	
R712	1-216-817-11	METAL CHIP 470 5% 1/16W	
R715	1-216-838-11	METAL CHIP 27K 5% 1/16W	
R716	1-216-834-11	METAL CHIP 12K 5% 1/16W	
R717	1-216-834-11	METAL CHIP 12K 5% 1/16W	
R718	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R719	1-216-816-11	METAL CHIP 390 5% 1/16W	
R720	1-216-822-11	METAL CHIP 1.2K 5% 1/16W	
R721	1-216-824-11	METAL CHIP 1.8K 5% 1/16W	
R722	1-216-824-11	METAL CHIP 1.8K 5% 1/16W	
R724	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R725	1-216-818-11	METAL CHIP 560 5% 1/16W	
R726	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R727	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R728	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R729	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R730	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R731	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R732	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R733	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R734	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R736	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R738	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R739	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	

Ref. No.	Part No.	Description			Remark
R741	1-216-833-11	METAL CHIP	10K	5%	1/16W
R742	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R743	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R744	1-216-814-11	METAL CHIP	270	5%	1/16W
R745	1-216-820-11	METAL CHIP	820	5%	1/16W
R746	1-216-699-11	METAL CHIP	100K	0.5%	1/10W
R747	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R748	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R749	1-216-845-11	METAL CHIP	100K	5%	1/16W
R750	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R751	1-216-821-11	METAL CHIP	1K	5%	1/16W
R752	1-216-821-11	METAL CHIP	1K	5%	1/16W
R753	1-216-845-11	METAL CHIP	100K	5%	1/16W
R754	1-216-845-11	METAL CHIP	100K	5%	1/16W
R755	1-216-845-11	METAL CHIP	100K	5%	1/16W
R756	1-216-841-11	METAL CHIP	47K	5%	1/16W
R757	1-216-833-11	METAL CHIP	10K	5%	1/16W
R758	1-216-821-11	METAL CHIP	1K	5%	1/16W
R759	1-216-821-11	METAL CHIP	1K	5%	1/16W
R760	1-216-817-11	METAL CHIP	470	5%	1/16W
R761	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R762	1-216-839-11	METAL CHIP	33K	5%	1/16W
R763	1-216-835-11	METAL CHIP	15K	5%	1/16W
R764	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R765	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R766	1-216-833-11	METAL CHIP	10K	5%	1/16W
R767	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R768	1-216-844-11	METAL CHIP	82K	5%	1/16W
R769	1-216-835-11	METAL CHIP	15K	5%	1/16W
R770	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R771	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R772	1-216-809-11	METAL CHIP	100	5%	1/16W
R773	1-216-821-11	METAL CHIP	1K	5%	1/16W
R774	1-216-821-11	METAL CHIP	1K	5%	1/16W
R775	1-216-857-11	METAL CHIP	1M	5%	1/16W
R776	1-216-845-11	METAL CHIP	100K	5%	1/16W
R777	1-216-817-11	METAL CHIP	470	5%	1/16W
R779	1-216-857-11	METAL CHIP	1M	5%	1/16W
R780	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R781	1-216-833-11	METAL CHIP	10K	5%	1/16W
R782	1-216-833-11	METAL CHIP	10K	5%	1/16W
R783	1-216-833-11	METAL CHIP	10K	5%	1/16W
R784	1-216-015-00	METAL CHIP	39	5%	1/10W
R785	1-216-014-00	METAL GLAZE	36	5%	1/10W
R786	1-216-699-11	METAL CHIP	100K	0.5%	1/10W
R787	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R788	1-216-839-11	METAL CHIP	33K	5%	1/16W
R789	1-216-833-11	METAL CHIP	10K	5%	1/16W
R790	1-216-821-11	METAL CHIP	1K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R791	1-216-836-11	METAL CHIP	18K	5%	1/16W
R792	1-216-304-11	METAL CHIP	3.3	5%	1/10W
R793	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R794	1-216-841-11	METAL CHIP	47K	5%	1/16W
R796	1-216-821-11	METAL CHIP	1K	5%	1/16W
R797	1-216-833-11	METAL CHIP	10K	5%	1/16W
R801	1-216-821-11	METAL CHIP	1K	5%	1/16W
R803	1-216-864-11	METAL CHIP	0		
R804	1-216-811-11	METAL CHIP	150	5%	1/16W
R805	1-216-837-11	METAL CHIP	22K	5%	1/16W
R806	1-216-821-11	METAL CHIP	1K	5%	1/16W
R807	1-216-816-11	METAL CHIP	390	5%	1/16W
R808	1-216-864-11	METAL CHIP	0		
R809	1-216-818-11	METAL CHIP	560	5%	1/16W
R810	1-216-821-11	METAL CHIP	1K	5%	1/16W
R811	1-216-839-11	METAL CHIP	33K	5%	1/16W
R822	1-216-821-11	METAL CHIP	1K	5%	1/16W
R825	1-216-836-11	METAL CHIP	18K	5%	1/16W
R826	1-216-821-11	METAL CHIP	1K	5%	1/16W
R832	1-216-840-11	METAL CHIP	39K	5%	1/16W
R833	1-216-022-00	METAL CHIP	75	5%	1/10W
R834	1-216-821-11	METAL CHIP	1K	5%	1/16W
R835	1-216-833-11	METAL CHIP	10K	5%	1/16W
R836	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R837	1-216-849-11	METAL CHIP	220K	5%	1/16W
R838	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R839	1-216-833-11	METAL CHIP	10K	5%	1/16W
R843	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R844	1-216-821-11	METAL CHIP	1K	5%	1/16W
R847	1-216-817-11	METAL CHIP	470	5%	1/16W
R849	1-216-836-11	METAL CHIP	18K	5%	1/16W
R850	1-216-834-11	METAL CHIP	12K	5%	1/16W
R851	1-216-833-11	METAL CHIP	10K	5%	1/16W
R852	1-216-809-11	METAL CHIP	100	5%	1/16W
R854	1-216-817-11	METAL CHIP	470	5%	1/16W
R855	1-216-814-11	METAL CHIP	270	5%	1/16W
R856	1-216-817-11	METAL CHIP	470	5%	1/16W
R857	1-216-817-11	METAL CHIP	470	5%	1/16W
R858	1-216-818-11	METAL CHIP	560	5%	1/16W
R859	1-216-818-11	METAL CHIP	560	5%	1/16W
R860	1-216-817-11	METAL CHIP	470	5%	1/16W
R861	1-216-818-11	METAL CHIP	560	5%	1/16W
R862	1-216-819-11	METAL CHIP	680	5%	1/16W
R863	1-216-833-11	METAL CHIP	10K	5%	1/16W
R864	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R865	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R866	1-216-833-11	METAL CHIP	10K	5%	1/16W
R867	1-216-821-11	METAL CHIP	1K	5%	1/16W

Ref. No.	Part No.	Description	Remark
R868	1-216-831-11	METAL CHIP 6.8K 5%	1/16W
R869	1-216-864-11	METAL CHIP 0	
R895	1-216-833-11	METAL CHIP 10K 5%	1/16W
R917	1-216-813-11	METAL CHIP 220 5%	1/16W
R918	1-216-813-11	METAL CHIP 220 5%	1/16W
R921	1-216-864-11	METAL CHIP 0	
R922	1-216-864-11	METAL CHIP 0	
R924	1-216-864-11	METAL CHIP 0	
R925	1-216-864-11	METAL CHIP 0	
R926	1-216-864-11	METAL CHIP 0	
R927	1-216-864-11	METAL CHIP 0	
R928	1-216-864-11	METAL CHIP 0	
R940	1-216-847-11	METAL CHIP 150K 5%	1/16W

< NETWORK RESISTOR >

Ref. No.	Part No.	Description	Remark
RB101	1-236-412-11	NETWORK, RES 1.0K	
RB102	1-236-432-11	NETWORK, RES 47K	
RB103	1-236-432-11	NETWORK, RES 47K	
RB104	1-236-424-11	NETWORK, RES 10K	
RB105	1-236-424-11	NETWORK, RES 10K	
RB106	1-236-424-11	NETWORK, RES 10K	
RB107	1-236-424-11	NETWORK, RES 10K	
RB108	1-236-424-11	NETWORK, RES 10K	
RB109	1-236-424-11	NETWORK, RES 10K	
RB110	1-236-424-11	NETWORK, RES 10K	
RB111	1-236-412-11	NETWORK, RES 1.0K	
RB112	1-236-424-11	NETWORK, RES 10K	
RB113	1-236-424-11	NETWORK, RES 10K	
RB115	1-236-412-11	NETWORK, RES 1.0K	
RB116	1-236-412-11	NETWORK, RES 1.0K	
RB117	1-236-412-11	NETWORK, RES 1.0K	
RB118	1-236-412-11	NETWORK, RES 1.0K	
RB119	1-236-412-11	NETWORK, RES 1.0K	
RB120	1-236-412-11	NETWORK, RES 1.0K	
RB121	1-236-412-11	NETWORK, RES 1.0K	
RB122	1-236-424-11	NETWORK, RES 10K	
RB123	1-236-424-11	NETWORK, RES 10K	
RB130	1-236-424-11	NETWORK, RES 10K	
RB131	1-236-424-11	NETWORK, RES 10K	
RB132	1-236-436-11	NETWORK, RES 100K	
RB201	1-236-412-11	NETWORK, RES 1.0K	
RB202	1-236-412-11	NETWORK, RES 1.0K	
RB203	1-236-412-11	NETWORK, RES 1.0K	
RB204	1-236-412-11	NETWORK, RES 1.0K	
RB205	1-236-412-11	NETWORK, RES 1.0K	
RB206	1-236-412-11	NETWORK, RES 1.0K	
RB207	1-236-412-11	NETWORK, RES 1.0K	
RB208	1-236-412-11	NETWORK, RES 1.0K	
RB209	1-236-412-11	NETWORK, RES 1.0K	
RB210	1-236-412-11	NETWORK, RES 1.0K	
RB211	1-236-412-11	NETWORK, RES 1.0K	
RB212	1-236-412-11	NETWORK, RES 1.0K	
RB213	1-236-412-11	NETWORK, RES 1.0K	
RB214	1-236-424-11	NETWORK, RES 10K	
RB215	1-236-424-11	NETWORK, RES 10K	
RB216	1-236-424-11	NETWORK, RES 10K	
RB217	1-236-424-11	NETWORK, RES 10K	
RB218	1-236-424-11	NETWORK, RES 10K	
RB219	1-236-424-11	NETWORK, RES 10K	
RB220	1-236-424-11	NETWORK, RES 10K	
RB221	1-236-424-11	NETWORK, RES 10K	
RB222	1-236-424-11	NETWORK, RES 10K	
RB223	1-236-412-11	NETWORK, RES 1.0K	
RB224	1-236-424-11	NETWORK, RES 10K	
RB225	1-236-412-11	NETWORK, RES 1.0K	
RB227	1-236-412-11	NETWORK, RES 1.0K	

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description	Remark
RV301	1-238-090-11	RES, ADJ CERMET 10K	
RV401	1-238-087-11	RES, ADJ CERMET 1K	
RV402	1-238-089-11	RES, ADJ CERMET 4.7K	
RV601	1-238-091-11	RES, ADJ CERMET 22K	
RV602	1-238-092-11	RES, ADJ CERMET 47K	
RV603	1-238-089-11	RES, ADJ CERMET 4.7K	
RV604	1-238-088-11	RES, ADJ CERMET 2.2K	
RV605	1-238-088-11	RES, ADJ CERMET 2.2K	
RV651	1-238-087-11	RES, ADJ CERMET 1K	
RV652	1-238-087-11	RES, ADJ CERMET 1K	
RV653	1-238-088-11	RES, ADJ CERMET 2.2K	
RV701	1-238-087-11	RES, ADJ CERMET 1K	
RV741	1-238-090-11	RES, ADJ CERMET 10K	
RV742	1-238-089-11	RES, ADJ CERMET 4.7K	
RV771	1-238-092-11	RES, ADJ CERMET 47K	
RV772	1-238-087-11	RES, ADJ CERMET 1K	
RV802	1-238-087-11	RES, ADJ CERMET 1K	

< CRYSTAL >

Ref. No.	Part No.	Description	Remark
X101	1-527-997-21	VIBRATOR, CRYSTAL (4MHz)	
X102	1-577-118-11	VIBRATOR, LITHIUM NIOBATE (4MHz)	
X201	1-577-349-21	VIBRATOR, CRYSTAL (16MHz)	
X701	1-577-117-21	VIBRATOR, CRYSTAL (4.43MHz)	

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Ref.No.	Part No.	Description			Remark
*	A-7062-529-A	TU-126 BOARD, COMPLETE			
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		(Ref.No 6,000 Series)			
	3-744-166-01	HOLDER, ANTENNA			
	3-746-907-01	LID, TDD SHIELD CASE			
	3-746-908-01	LID, REAR, TDD SHIELD CASE			
	3-746-915-01	LID, REAR, TU SHIELD CASE			
		< CAPACITOR >			
C001	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C002	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C004	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C005	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C006	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C007	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C008	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C009	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C010	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C011	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C012	1-163-224-11	CERAMIC CHIP	7PF	0.25PF	50V
C013	1-163-224-11	CERAMIC CHIP	7PF	0.25PF	50V
C014	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C018	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C019	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C020	1-135-217-21	TANTALUM CHIP	15uF	20%	6.3V
C021	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C023	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C024	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C025	1-135-177-21	TANTALUM CHIP	1uF	20%	20V
C026	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C027	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C028	1-163-095-00	CERAMIC CHIP	12PF	5%	50V
C029	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C030	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C031	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C032	1-135-149-21	TANTALUM CHIP	2.2uF	20%	10V
C033	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C034	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C035	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C036	1-163-036-00	CERAMIC CHIP	0.068uF		50V
C037	1-163-036-00	CERAMIC CHIP	0.068uF		50V
C038	1-163-036-00	CERAMIC CHIP	0.068uF		50V
C039	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C040	1-163-095-00	CERAMIC CHIP	12PF	5%	50V
C041	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C042	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C044	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C045	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C046	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C047	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C048	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C049	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C050	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C051	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C054	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C058	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C059	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C060	1-135-217-21	TANTALUM CHIP	15uF	20%	6.3V
C061	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
C062	1-163-095-00	CERAMIC CHIP	12PF	5%	50V
C063	1-163-095-00	CERAMIC CHIP	12PF	5%	50V
C065	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C066	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C070	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C071	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C072	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C073	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C201	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C202	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C203	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C204	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C205	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C206	1-135-202-21	TANTAL. CHIP	22uF	20%	4V
C207	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C208	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C209	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C210	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C212	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C501	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C502	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C503	1-135-217-21	TANTALUM CHIP	15uF	20%	6.3V
C504	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C505	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C506	1-126-204-11	ELECT CHIP	47uF	20%	16V
C507	1-135-156-21	TANTALUM CHIP	6.8uF	10%	6.3V
C508	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C509	1-124-779-00	ELECT CHIP	10uF	20%	16v
C510	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C511	1-126-200-11	ELECT CHIP	10uF	20%	35V
C512	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C513	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C514	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C515	1-135-156-21	TANTALUM CHIP	6.8uF	10%	6.3V
C516	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C517	1-135-153-21	TANTALUM CHIP	2.2uF	10%	20V
C518	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C520	1-126-602-11	ELECT CHIP	3.3uF	20%	50V
C521	1-163-036-00	CERAMIC CHIP	0.068uF		50V

Ref. No.	Part.No.	Description	Remark
C522	1-135-155-21	TANTALUM CHIP 4.7uF 10% 10V	
C527	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
		< DISCRIMINATOR >	
CF051	1-577-560-11	FILTER, CERAMIC	
CF052	1-579-217-11	DISCRIMINATOR, CERAMIC	
CF053	1-409-478-11	FILTER, TRAP (CERAMIC)	
CF061	1-577-561-11	FILTER, CERAMIC	
CF062	1-579-218-11	DISCRIMINATOR, CERAMIC	
		< CONNECTOR >	
CN001	1-569-634-41	CONNECTOR, BOARD TO BOARD 30P	
CN002	1-566-523-11	CONNECTOR, FPC (ZIF) 7P	
CN003	* 1-565-541-11	PIN, CONNECTOR (PC BOARD) 2P	
		< DIODE >	
D001	8-719-400-18	DIODE MA152WK	
D501	8-719-400-18	DIODE MA152WK	
D502	8-719-400-18	DIODE MA152WK	
D503	8-719-400-18	DIODE MA152WK	
D504	8-719-400-18	DIODE MA152WK	
D601	8-719-106-44	DIODE RD9.1M-B2	
		< INDUCTOR >	
FB501	1-412-390-21	INDUCTOR, CHIP 0uH	
FB502	1-412-390-21	INDUCTOR, CHIP 0uH	
		< IC >	
IC001	8-759-504-58	IC TDA3842T	
IC002	8-759-634-94	IC M52018FP	
IC005	8-759-998-92	IC LM393D	
IC201	8-759-710-86	IC NJM2233BM	
IC202	8-759-710-86	IC NJM2233BM	
IC501	⚠8-759-979-50	IC FA7610N	
IC502	8-759-157-40	IC uPC574J	
		< AMPLIFIER >	
IU001	⚠1-466-330-11	AMPLIFIER, ISOLATION (RA-1)	
		< JACK >	
J001	1-507-921-00	JACK (EXT ANT)	
J601	1-563-282-11	JACK, SMALL TYPE (EAR B)	
J602	1-563-282-11	JACK, SMALL TYPE (EAR A)	

Ref. No.	Part No.	Description	Remark
		< COIL >	
L002	1-410-987-11	INDUCTOR, CHIP 0.33uH	
L004	1-412-029-11	INDUCTOR, CHIP 10uH	
L005	1-412-031-11	INDUCTOR, CHIP 47uH	
L006	1-410-377-31	INDUCTOR, CHIP 4.7uH	
L007	1-410-380-31	INDUCTOR, CHIP 8.2uH	
L008	1-410-393-11	INDUCTOR, CHIP 100uH	
L051	1-410-992-11	INDUCTOR, CHIP 0.82uH	
L052	1-412-029-11	INDUCTOR, CHIP 10uH	
L053	1-412-029-11	INDUCTOR, CHIP 10uH	
L201	1-410-387-11	INDUCTOR, CHIP 33uH	
L501	1-412-028-11	INDUCTOR, CHIP 4.7uH	
L502	1-412-030-11	INDUCTOR, CHIP 22uH	
L503	1-412-028-11	INDUCTOR, CHIP 4.7uH	
L505	1-412-030-11	INDUCTOR, CHIP 22uH	
		< TRANSISTOR >	
Q001	8-729-230-XX	TRANSISTOR 2SC2669-OY	
Q002	8-729-100-66	TRANSISTOR 2SC1623	
Q003	8-729-901-47	TRANSISTOR DTA143EK	
Q004	8-729-901-47	TRANSISTOR DTA143EK	
Q005	8-729-901-47	TRANSISTOR DTA143EK	
Q006	8-729-901-01	TRANSISTOR DTC144EK	
Q007	8-729-901-01	TRANSISTOR DTC144EK	
Q008	8-729-216-22	TRANSISTOR 2SA1162	
Q009	8-729-100-66	TRANSISTOR 2SC1623	
Q010	8-729-216-22	TRANSISTOR 2SA1162	
Q011	8-729-100-66	TRANSISTOR 2SC1623	
Q012	8-729-901-01	TRANSISTOR DTC144EK	
Q013	8-729-901-01	TRANSISTOR DTC144EK	
Q014	8-729-901-01	TRANSISTOR DTC144EK	
Q015	8-729-100-66	TRANSISTOR 2SC1623	
Q016	8-729-100-66	TRANSISTOR 2SC1623	
Q201	8-729-100-66	TRANSISTOR 2SC1623	
Q202	8-729-216-22	TRANSISTOR 2SA1162	
Q204	8-729-901-01	TRANSISTOR DTC144EK	
Q501	⚠8-729-421-15	TRANSISTOR 2SD1119-Q	
Q502	8-729-901-06	TRANSISTOR DTA144EK	
Q503	8-729-901-01	TRANSISTOR DTC144EK	
Q504	8-729-601-58	TRANSISTOR 2SC3053-C	
		< RESISTOR >	
R002	1-216-295-00	METAL CHIP 0 5% 1/10W	
R003	1-216-295-00	METAL CHIP 0 5% 1/10W	
R006	1-216-021-00	METAL CHIP 68 5% 1/10W	
R007	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R008	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R009	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description				Remark
R010	1-216-019-00	METAL CHIP	56	5%	1/10W	
R011	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R012	1-216-037-00	METAL CHIP	330	5%	1/10W	
R013	1-216-025-00	METAL CHIP	100	5%	1/10W	
R014	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R015	1-216-045-00	METAL CHIP	680	5%	1/10W	
R016	1-216-033-00	METAL CHIP	220	5%	1/10W	
R017	1-216-037-00	METAL CHIP	330	5%	1/10W	
R018	1-216-021-00	METAL CHIP	68	5%	1/10W	
R019	1-216-029-00	METAL CHIP	150	5%	1/10W	
R020	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R021	1-216-021-00	METAL CHIP	68	5%	1/10W	
R022	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R023	1-216-295-00	METAL CHIP	0	5%	1/10W	
R026	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R027	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R028	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R029	1-216-109-00	METAL CHIP	330K	5%	1/10W	
R031	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R032	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R033	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R034	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R035	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R036	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R038	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R039	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R040	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R041	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R042	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R043	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R044	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R045	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R046	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R047	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R048	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R049	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R051	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R056	1-216-037-00	METAL CHIP	330	5%	1/10W	
R057	1-216-035-00	METAL CHIP	270	5%	1/10W	
R058	1-216-025-00	METAL CHIP	100	5%	1/10W	
R059	1-216-017-00	METAL CHIP	47	5%	1/10W	
R060	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R068	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R069	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R070	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R071	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R072	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R073	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R075	1-216-073-00	METAL CHIP	10K	5%	1/10W	

Ref. No.	Part No.	Description				Remark
R201	1-216-039-00	METAL CHIP	390	5%	1/10W	
R202	1-216-039-00	METAL CHIP	390	5%	1/10W	
R203	1-216-047-00	METAL CHIP	820	5%	1/10W	
R204	1-216-045-00	METAL CHIP	680	5%	1/10W	
R205	1-216-021-00	METAL CHIP	68	5%	1/10W	
R206	1-216-025-00	METAL CHIP	100	5%	1/10W	
R207	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R209	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R210	1-216-295-00	METAL CHIP	0	5%	1/10W	
R211	1-216-295-00	METAL CHIP	0	5%	1/10W	
R212	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R213	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R501	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R502	1-216-091-00	METAL CHIP	56K	5%	1/10W	
R503	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R504	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R505	1-216-117-00	METAL CHIP	680K	5%	1/10W	
R506	1-216-748-11	METAL CHIP	39K	5%	1/10W	
R507	1-216-103-00	METAL CHIP	180K	5%	1/10W	
R508	1-216-001-00	METAL CHIP	10	5%	1/10W	
R509	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R511	1-216-009-00	METAL CHIP	22	5%	1/10W	
R512	1-216-043-00	METAL CHIP	560	5%	1/10W	
R513	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R514	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R516	1-216-043-00	METAL CHIP	560	5%	1/10W	
R517	1-216-043-00	METAL CHIP	560	5%	1/10W	
R518	1-216-043-00	METAL CHIP	560	5%	1/10W	
R520	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R521	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R601	1-216-025-00	METAL CHIP	100	5%	1/10W	
R602	1-216-025-00	METAL CHIP	100	5%	1/10W	
R603	1-216-025-00	METAL CHIP	100	5%	1/10W	
R604	1-216-025-00	METAL CHIP	100	5%	1/10W	

< VARIABLE RESISTOR >

RV201	1-238-091-11	RES, ADJ CERMET22K
RV501	1-238-087-11	RES, ADJ CERMET1K

< FILTER >

SWF001	1-577-604-11	FILTER, SAW
SWF002	1-404-712-11	SAWF

< TRANSFORMER >

T001	1-460-079-11	COIL
T002	1-460-078-11	COIL
T004	1-460-149-11	COIL
T501	1-450-107-11	TRANSFORMER, DC-DC CONVERTER

Ref. No.	Part No.	Description	Remark
		< TUNER >	
TU001	⚠1-465-569-11	TUNER, ET (BT-KG301)	

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	* 1-634-347-11	UC-6 BOARD (Ref.No 4,000 Series) **********	
	* 3-746-939-01	INSULATOR, UC	
		< CONNECTOR >	
CN001	1-566-529-11	CONNECTOR, FPC (ZIF) 13P	
CN002	1-566-527-11	CONNECTOR, FPC (ZIF) 11P	
CN003	1-566-547-11	CONNECTOR, FPC (NON ZIF) 15P	

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		MISCELLANEOUS *************	
25	1-575-856-11	CABLE, FLAT (1.0MM PITCH) 7 CORE	
57	1-466-334-11	SWITCH BLOCK, CONTROL	
60	⚠· 1-466-333-11	INVERTER UNIT, DC-AC	
63	1-575-858-11	CABLE, FLAT (1.0MM PITCH) 16 CORE	
115	1-575-859-11	CABLE, FLAT (1.0MM PITCH) 15 CORE	
122	1-575-857-11	CABLE, FLAT (1.0MM PITCH) 12 CORE	
163	1-808-505-12	SENSOR (DEW)	
AN001	1-501-456-11	ANTENNA, TELESCOPIC	
BL901	1-518-668-11	TUBE UNIT, FLUORECENT	
LCD901	1-809-002-11	DISPLAY MODULE, LIQUID CRYSTAL	
M902	8-835-331-01	MOTOR, DC U-22A (CAPSTAN)	
M903	A-7040-208-A	MOTOR ASSY, THREADING (LOADING)	
SP901	1-544-323-11	SPEAKER	

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Ref. No.	Part No.	Description	Remark
		ACCESSORY & PACKING MATERIAL *****************************	
	⚠· 1-528-174-31	BATTERY, LITHIUM (CR2032 TYPE)	
	1-574-517-11	CORD, CONNECTION	
	2-366-919-00	BAG, PROTECTION	
	3-728-996-01	CASE, SOFT	
	* 3-744-184-01	CUSHION (UPPER)	
	* 3-744-185-01	CUSHION (LOWER)	
	3-752-067-11	MANUAL, INSTRUCTION (ENGLISH)	
	3-752-067-41	MANUAL, INSTRUCTION (GERMAN, FRENCH, SPANISH)	
	3-752-067-51	MANUAL, INSTRUCTION (DUTCH, SWEDISH, ITALIAN)	
		**** ACCESSORY & PACKING MATERIAL (KIT) **** **********************************	
	* 3-746-957-51	INDIVIDUAL CARTON	
	* 3-749-784-01	CUSHION (UPPER), ACC	
	* 3-749-785-01	CUSHION (LOWER), ACC	
	** AC-V30	AC POWER ADAPTOR	
	*** MDR-E454	HEAD PHONE	
	*** NP-66H	BATTERY PACK	

< Note >

** MARK PARTS IS AVAILABLE FOR REPAIR SERVICE.
*** MARK PARTS IS AVAILABLE AS AN OPTIONAL ACCESSORY.

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HARDWARE LIST

# 1	7-623-208-22	SW 3, TYPE 2
# 2	7-627-553-18	SCREW, PRECISION +P 2X2
# 3	7-627-555-88	SCREW, PRECISION +P 1.4X1.8
# 4	7-627-452-48	SCREW, PRECISION +RK 2X2.5
# 5	7-627-553-68	SCREW, PRECISION +P 2X6 TYPE3
# 6	7-684-023-04	N 3, TYPE 2
# 7	7-688-003-01	W 3, SMALL
# 8	7-627-553-37	SCREW (M2X3), SPECIAL HEAD

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SECTION 7
MECHANICAL ADJUSTMENTS

For Mechanical Adjustments

Refer to mechanical adjustment (8 mm Video MECHANICAL ADJUSTMENT MANUAL Ⅲ) manual for the adjustments and checks of mechanism section and the mechanical parts replacement. (9-972-732-11)

For setting of the track shift mode, however, refer to the following.

7-1. SETTING THE TRACK SHIFT MODE

[Setting Method]

1) Setting the test mode* 0011 (Jig switching position 3)

CN802

1	TEST B
2	GND
3	TEST A
4	TEST C
5	TEST D

Jig switching position 3

*Refer to ⌜8-1-7. Test mode⌟.

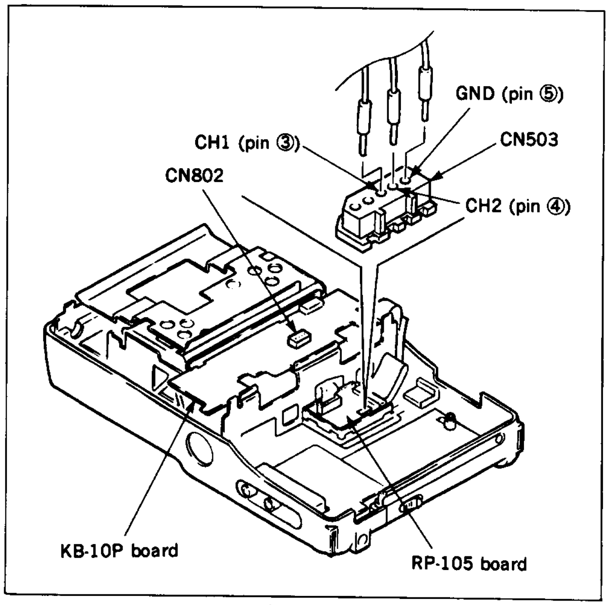


Fig. 7-1.

7-2. PREPARATION FOR ADJUSTMENT

1) Clean the tape running surfaces (tape guide, drum, capstan shaft, pinch roller.)
2) Connect to the oscilloscope.
   CH1 : RP-105 board CN503 pin ③ (PB RF)
   CH2 : RP-105 board CN503 pin ④ (SWP)
3) Play back the tracking alignment tape (WR5-1CP) (8-967-995-07).
4) Check that the RF waveform of the oscilloscope is flat at both inlet and outlet sides. When not flat, make adjustment as follows. (Refer to mechanical adjustment manual.)

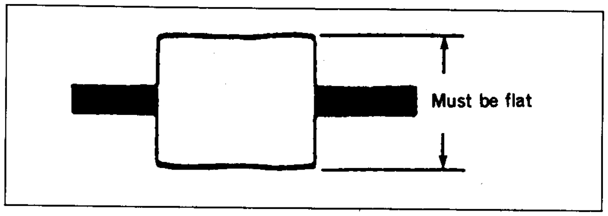


Fig. 7-2.

SECTION 8
ELECTRICAL ADJUSTMENTS

See the adjusting parts location diagram from on page 170 for the adjustment.

8-1. PREPARATION FOR ADJUSTMENT

The following measurement instruments are used for the electric adjustment.

8-1-1. Using Instruments

1) Monitor TV
2) Oscilloscope having two phenomena, band of 10MHz or more, and the delay mode.
3) Frequency counter
4) PAL Pattern generator
   (having the video output terminal)
   SECAM Pattern generator
   (Used on SECAM-PAL Conversion System)
5) Digital voltmeter
6) Audio generator
7) Audio level meter
8) Audio distortion rate meter
9) Audio attenuator
10) Stabilized power source
11) Alignment tape
    - For tracking adjustment
      (WR5-1CP) Part code: 8-967-995-07
    - For checking of SP mode operation
      (WR5-5CSP) Part code: 8-967-995-47
      (WR5-4CSP) Part code: 8-967-995-46
    - For checking of LP mode operation
      (WR5-4CL) Part code: 8-967-995-56
    - For video frequency characteristic adjustment
      (WR5-6C) Part code: 8-967-995-17
12) Extension harness
    Between AU-93 board CN001 and SV-66 board CN005
    J-6082-111-A
    Between AU-93 board CN002 and SV-66 board CN006
    J-6082-112-A
    Between RG-22 board CN001 and SV-66 board CN004
    J-6082-113-A
13) COMMON voltage adjustment jig (J-6082-024-A)

8-1-2. Connection of Instruments

If there is no special direction, connect the measuring instruments as shown in the following figure and perform the adjustment.

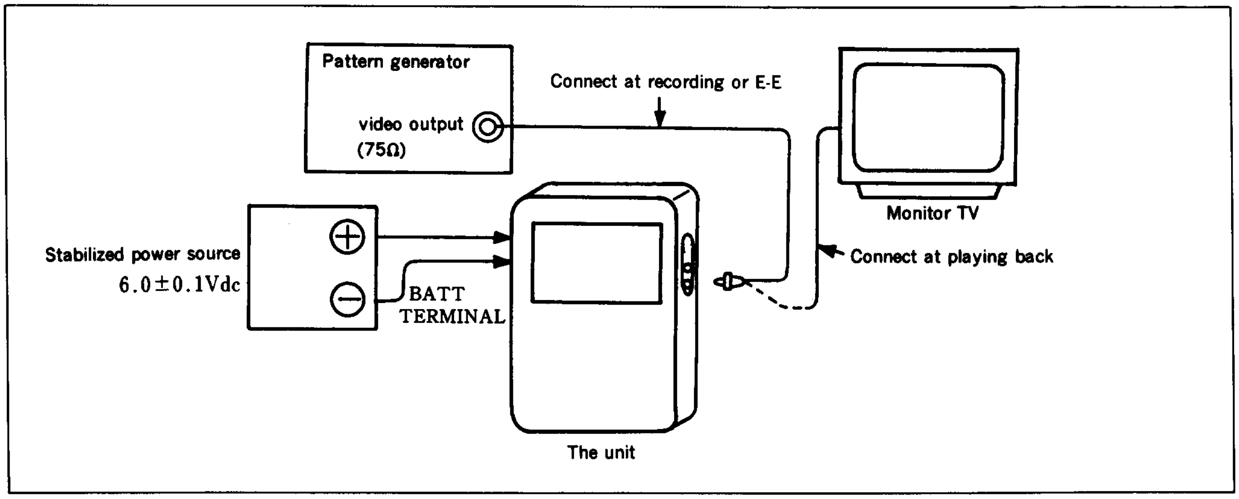

Pattern generator
video output
(75Ω)
Connect at recording or E-E
Monitor TV
Stabilized power source
6.0±0.1Vdc
BATT
TERMINAL
Connect at playing back
The unit

Fig. 8-1.

8-1-3. VIDEO/AUDIO Terminal of the Unit

The VIDEO/AUDIO terminal of the unit has the function of both input and output. The operation as the input terminal or as the output terminal is automatically selected according to the operating condition of the unit.
When connecting with the other instruments, perform the connection according to the input-output of the terminal.

The operation condition of the unit and the automatic input-output selection of the terminal.

Input mode selected with the INPUT SELECT button	The case that the unit is stopped or the recording mode is selected.	The case that the unit is set to the playback mode.
TUNER (television screen)	Output	Output
LINE*	Input	Output
CAMERA	Output	Output

* When the LINE is selected with the INPUT SELECT button, the display of INPUT or OUTPUT is shown according to the operation condition.

8-1-4. Set-up at the Adjustment

As the video signal obtained from the pattern generator is used as the adjustment signal for adjusting, it is required that the video output signal satisfies the specified value. Connect the pattern generator and the oscilloscope with the VIDEO input-output terminal. Check that the amplitude of the synchronous signal of the video signal is approximately 0.3V, the amplitude of the picture part is approximately 0.7V, the amplitude of the burst signal is approximately 0.3V and is flat, and the level proportion of the burst signal and the red signal is 0.30 : 0.66.

The video signal (color bar) used for the adjustment is shown in the Fig. 8-2.

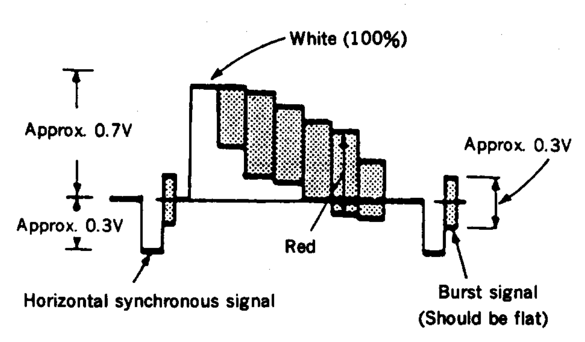


Fig. 8-2. Color bar signal of the pattern generator

8-1-5. Alignment Tape

The following tapes are prepared for the alignment tape.

Use the tape designated in the signal column of each adjustment.

Name	Recording mode	Type of tape	Speed of tape	Recording contents		Usage
				Video area	PCM area	
Tracking WR5-1CP	L	MP	SP	CH2 : 1MHz Signal for tape pass adjustment Marker for switching position adjustment(CH1 : 9MHz)		Tape pass adjustment Switching position adjustment
Video frequency characteristic WR5-6C	L	MP	SP	RF sweep 0~15MHz Marker 1, 3.58, 5.5, 7MHz		Frequency characteristic adjustment
Checking operation WR5-4CSP or WR5-5CSP	L	MP	SP	● Video signal Color bar 4 minutes Monoscope 4 minutes ● Audio signal (AFM) 400Hz 60% modulation	● Audio signal (PCM) monoscope part 20Hz, 20sec. } Re-peat four times 400Hz, 20sec. 14kHz, 20sec. Color bar part 1kHz 4 minutes	Checking operation
WR5-4CL	L	MP	LP	● Video signal Color bar 4 minutes monoscope 4 minutes ● Audio signal (AFM) 400Hz 60% modulation		

Note: Recording mode
L·········Normal mode

Types of tape
MP·········Application type metal tape

Table. 8-1.

The color bar signal recorded in the alignment tape is shown in the Fig.8-3.

Note : Measure with the VIDEO INPUT-OUTPUT terminal (75Ω terminal) playback mode.

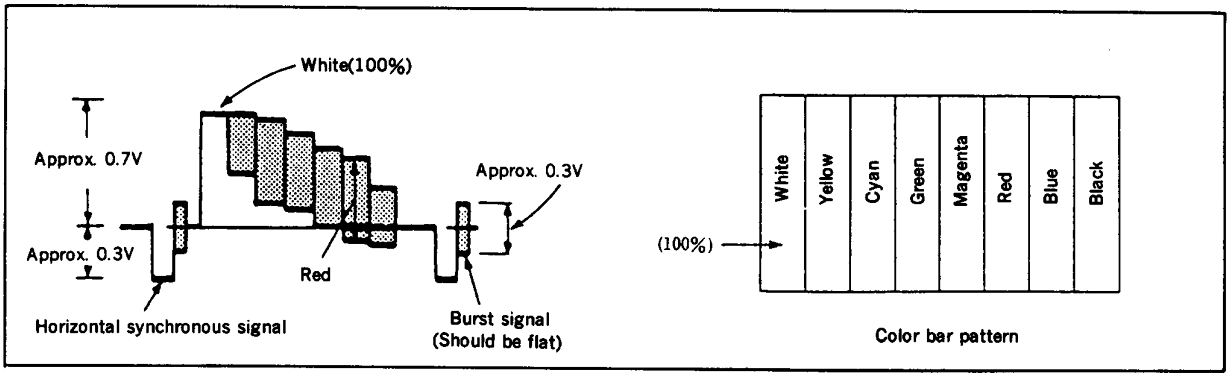

White(100%)
Approx. 0.7V
Approx. 0.3V
Approx. 0.3V
Red
Horizontal synchronous signal
Burst signal
(Should be flat)
(100%)
White
Yellow
Cyan
Green
Magenta
Red
Blue
Black
Color bar pattern

Fig.8-3. Color bar signal of the alignment tape

8-1-6. Input/Output Level and Impedance

VIDEO/AUDIO	Input-output terminal (phono jack)
VIDEO input	Input signal : 1Vp-p, 75Ω unbalance, Synchronous negative
VIDEO output	Output signal : 1Vp-p, 75Ω unbalance, Synchronous negative
AUDIO input	Input level : −7.5dBs(0dBs=0.775Vrms) Input impedance : 47kΩ or more
AUDIO output	Specified output : −7.5dBs Output impedance : 10kΩ or less

8-1-7. TEST MODE

Use CN802 on the KB-10P board.

CN802 pin position

1	TEST B
2	GND
3	TEST A
4	TEST C
5	TEST D

When each terminal of the TEST A, B, C and D is shortened and opened, twelve types of TEST MODE are selected.

When servicing, attaching the "test mode set jig" (J-6082-110-A) to CN802 allows to select twelve types of test mode with the hexadecimal selecting switches of the jig.

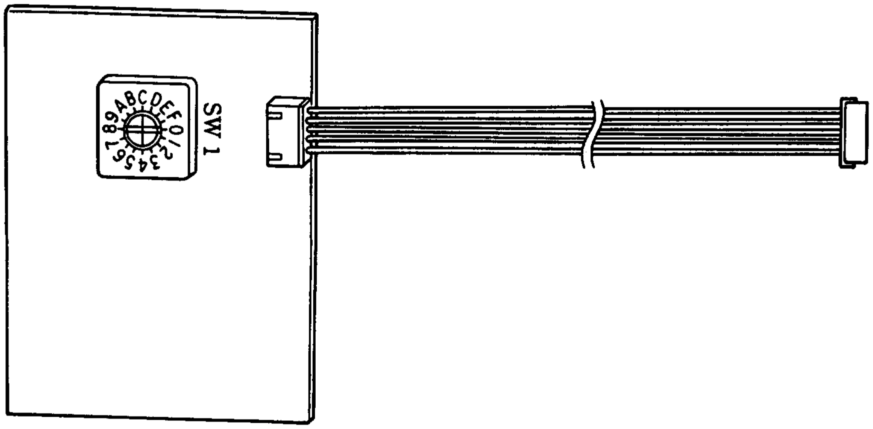


Fig8-4. Test mode set jig

TEST MODE table		Switch position of the test mode set jig.
DCBA	SELECT MODE	
0 0 0 0	Normal mode	0
0 0 0 1	Emergency off	1
0 0 1 0	TT TEST	2
0 0 1 1	Track shift	3
0 1 0 0	SW POSI L	4
0 1 0 1	SW POSI H	5
0 1 1 0	BATT DOWN PRE	6
0 1 1 1	BATT DOWN END	7
1 0 0 0	VIDEO DATA, MP, SP	8
1 0 0 1	VIDEO DATA, MP, LP	9
1 0 1 0	VIDEO DATA, ME, SP	A
1 0 1 1	VIDEO DATA, ME, LP	B

The test code is designated by four figures.

MSB LSB
"D", TEST "C", TEST "B", TEST "A"

At short : 1, At open : 0

VIDEO DATA SELECT MODE is set at the TEST, "D" MAKE.

① Normal mode

Normal set condition

② Emergency off (Release of emergency stop)

③ TT TEST

MODE for extending the SIRCS code (For producing line)

④ Track shift

Run on the ATF track shift condition at the playback mode.

Timer microcomputer is in the clock adjustment mode.

⑤ SW POSI

Adjustment mode of switch position.

SWPOSI is stored in EEPROM as 16bit DATA. This data is adjusted dividing high 8bit and low 8bit. Use CH+/− KEY.

TEST MODE0101 : Varies at 16μsec per 1STEP.

TEST MODE0100 : Varies at 1μsec per 1STEP. When low 8 bit is incremented from FF. HEX, high 8 bit goes UP. And when it is decremented from 00.HEX, high 8 bit goes DOWN.

When the EEPROM has been replaced, it takes considerable time to adjust it. Therefore. the data must be preset before entering adjustment.

Preset function of the SW POSI is added. The preset function sets to high 8 bit to 07. HEX, when the DATA SCREEN KEY of SC part is pressed in the SW POSI adjustment mode. The low 8 bit is not varied.

<When the SV-66 Board IC206 is CXP80116-805Q>

If SW POSI adjustment has been done (for example, for mechanism deck replacement), IC206 should be replaced by CXP80116-821Q (8-752-818-67).

⑥ BATTTERY DOWN ADJUSTMENT

Adjusted with TEST MODE 0111. When this mode is set, the following display is shown on LCD.

$$\left.\begin{array}{ll}\text{PRE} & -1.76 \\ \text{DOWN} & -1.74\end{array}\right\} \text{ex}$$

Supplying voltage for adjusting is performed with applying 5.50V+0.02V to the battery terminal in the TUNER REC SP MODE. When pressing the CH+ KEY on the KB-10P board, the color of display on the LCD turns to blue for few seconds from white, and then returns to white. The voltage of the battery PRE, DOWN is stored in EEPROM as the 8bit DATA by this operation.

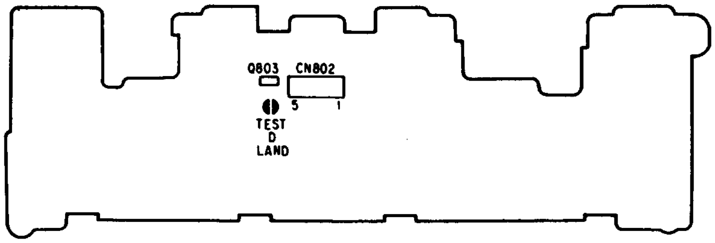
⑦ VIDEO DATA ADJUSTMENT MODE

Short the TEST D (Solder the split land at the lower part of the KB-10P board Q803)
The following display is shown on the LCD.

VIDEO DATA

CFL1 1 (RESET)
CFL2 1 (DISPLAY)
NCL1 1 (SLEEP)
NCL2 1 (NEXT)
NCLP1 1 (UP)
NCLP2 1 (CLOCK)

KB-10P BOARD (COMPONENT SIDE)



Six types of DATA are varied with the KEY on the SC part.

RESET → COUNTER RESET KEY
DISPLAY → DATA SCREEN KEY
SLEEP → SLEEP KEY
NEXT → NEXT KEY
UP → + KEY
CLOCK → CLOCK SET KEY

Pressing each KEY allows to rewrite DATA. ("0" is rewritten to "L", "1" is rewritten to "H".)
Four modes are adjusted by the types of TAPE (ME, MP) and TAPE SPEED (SP, LP).when the CH+KEY is pressed, the color of the display on the LCD turns to blue for few seconds from white and returns to white. The function to store the screen DATA in EEPROM is added by this operation. (See to the Table 8-2. for the data writing to EEPROM.)

Table 8-2. EE P ROM Write Data

TEST MODE						CFL1	CFL2	NCL1	NCL2	NCLP1	NCLP2
D	C	B	A	Switch position of the test mode set jig							
1	0	0	0	8	SP•MP	H	L	H	L	L	L
1	0	0	1	9	LP•MP	L	H	L	H	H	L
1	0	1	0	A	SP•ME	H	L	H	L	L	L
1	0	1	1	B	LP•ME	L	H	L	H	H	L

Note) When EEPROM is replaced, the following adjustment or write should be performed.

1. SW POSI adjustment
2. BATTERY DOWN adjustment
3. VIDEO DATA write
4. Channel preset

8-2. POWER SOURCE PART ADJUSTMENT

8-2-1. UNREG Power Source Voltage Check (SV-66 board)

Mode	Stop (POWER ON)
Measuring instrument	Digital voltmeter
BL UNREG check	
Measurement point	CN007 Pin ⑫
Specified value	5.9±0.2Vdc
DD UNREG check	
Meaurement point	CN007 Pin ⑪
Specified value	5.9±0.2Vdc
SS UNREG check	
Measurement point	CN007 Pin ⑥
Specified value	5.9±0.2Vdc
LD UNREG check	
Measurement point	CN007 Pin ③
Specified value	5.9±0.2Vdc
CAP UNREG check	
Measurement point	CN007 Pin ①
Specified value	5.9±0.2Vdc

[Checking method]

1) Check that the voltage of the stabilized power source is 6.0±0.1Vdc.
2) Each specified value should be satisfied.

8-2-2. Switch 5V Adjustment (SV-66 board)

Mode	Tuner receiver, record (SP mode)
Signal	Optional TV broadcast
Measurement point	CN009 Pin ⑭
Measuring instrument	Digital voltmeter
Adjustment element	RV401
Specified value	4.95±0.05Vdc

[Adjustment Method]

1) Adjust with RV401 to 4.95±0.05Vdc.

8-2-3. DD Converter Frequency Adjustment (SV-66 board)

Mode	Stop (POWER ON)
Measurement point	IC401 Pin ①
Measuring instrument	Frequency counter
Adjustment element	RV402
Specified value	479±5kHz

[Adjustment Method]

1) Adjust the oscillation frequency to 479±5Vdc with RV402.

8-2-4. −8V Adjustment (TU-126 board)

Mode	Stop (POWER ON)
Measurement point	CN001 Pin ㉒
Measuring instrument	Digital voltmeter
Adjustment element	RV501
Specified value	−8.0±0.1Vdc

[Adjustment Method]

1) Adjust with RV501 to −8.0±0.1Vdc.

8-2-5. LCD Power Source Voltage Check (RG-22 board)

Mode	Stop
Measuring instrument	Digital voltmeter
+13V check	
Measurement point	CN001 Pin ㉒
Specifed value	13.0±0.7Vdc
−20V check	
Measurement point	CN001 Pin ⑳
Specified value	−20.0±1.5Vdc

[Checking Method]

1) Each specified value should be satisfied.

8-2-6. CAM UNREG Check (CN-6P board)

Mode	Camera standby
Measurement point	CN601 Pin ①
Measuring instrument	Digital voltmeter
Specified value	5.75±0.10Vdc

[Connection]

1) Connect the CAMERA connector with the camera.
   If there is no camera, connect the resistance of 12Ω 5W between CN601 Pin ① and Pin ⑤.

[Checking Method]

1) Turn on the power, and input CAMERA with the INPUT SELECT button.
2) Check that the voltage of the stabilized power source is 6.0±0.1Vdc.
3) Check that the voltage of the CN601 Pin ① is 5.75±0.10Vdc.

8-3. SYSTEM CONTROL SYSTEM ADJUSTMENT

8-3-1. Clock Precision Adjustment (SV-66 board)

Mode	Stop (POWER ON)
Test mode *	0011 (Jig switch position 3)
Measurement point	CN003 Pin ㉔
Measuring instrument	Frequency counter
Adjustment element	CV101
Specified value	16384.0±0.2Hz

* Refer to 「8-1-7. Test mode」.

[Adjustment Method]

1) Set the test mode * 0011 (jig switch position 3).
2) Adjust with CV101 to 16384.0±0.2Hz.

8-3-2. Battery Down Adjustment

Refer to 「8-1-7. Test Mode ⑥ Battery Down Adjustment」.

8-4. SERVO SYSTEM ADJUSTMENT

8-4-1. CUE/REV Adjustment (SV-66 board)

Mode	CUE and REV
Signal	Alignment tape : for checking the SP mode operation (WR5-5CSP) : for checking the LP mode operation (WR5-4CL)
Measurement point	IC302 Pin ⑩ and Pin ⑪ and Q306 ©
Measuring instrument	Oscilloscope
Adjustment element	RV301
Specified value	WR5-5CSP at CUE/REV Q306 © DC voltage level is "H" WR5-4CL at CUE/REV Q306 © DC voltage level is "L"

[Adjustment Method]

1) Adjust the IC302 Pin ⑩ to 3.2±0.1Vdc with RV301.
2) Play back the WR5-5CSP and set the CUE and REV mode, check that the DC voltage level of Q306 © is "H" (4Vdc or more). And play back the WR5-4CL and set the CUE and REV mode, check that the DC voltage level of Q306 © is "L" (1Vdc or less).
3) When the item 2) is not satisfied, play back the WR5-5CSP and set the CUE and REV mode, measure the DC voltage of IC302 Pin ⑪. Set this value as V_{SP}. Play back the WR5-4CL and set the CUE and REV mode, measure the DC voltage of IC302 Pin ⑪. Set this value as V_{LP}.

   $$V=\frac{V_{SP}+V_{LP}}{2}$$

   Obtain the value of V, and adjust with RV301 so that the DC voltage of IC302 Pin ⑩ is the value of V.
4) Return to the item 2) and reconfirm.

8-4-2. Switching Position Adjustment (RP-105 board)

Mode	Playback
Test mode *	0101 (Jig switching position 5) and 0100 (Jig switching position 4)
Signal	Alignment tape: for tracking adjustment (WR5-1CP)
Measurement point	CH1: CN503 Pin ④ (RF SW P) CH2: CN503 Pin ③ (RF OUT)
Measuring instrument	Oscilloscope
Adjustment KEY	KB-10P board S802 (CH−) and S803 (CH+)
Specified value	t=0±10μsec

* Refer to 「8-1-7. Test mode」.

[Adjustment Method]

1) Set the test mode * 0101 (Jig switching position 5).
2) Press the DATA SCREEN button on the upper part of the LCD.
3) Press the S802(CH−) and S803(CH+) switches on the KB-10P board so that "t" is nearly 0. (rough adjustment)
4) Set the test mode * 0100 (Jig switching position 4).
5) Press S802(CH−) and S803 (CH+) switches on the KB-10 board so that t=0±10μsec. (fine adjustment)
6) Disconnect the test mode jig.

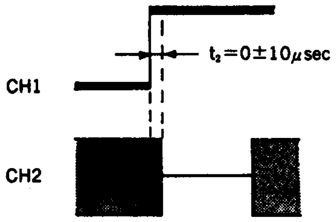


Fig. 8-6.

8-5. VIDEO SYSTEM ADJUSTMENT

Adjust the video system in the following procedures in principle. The color bar signal supplied from the pattern generator is used as the video input signal for the video system adjustment of the recording mode. Check that the synchronous signal and the color burst signal are satisfied with the specified value designated to the adjusting setup as shown in the figure 8-2.

[Adjustment Procedures]

1) Playback frequency characteristic adjustment
2) fsc check
3) SYNC AGC adjustment
4) IR adjustment
5) Y/C separation adjustment
6) Emphasis Y level adjustment
7) De-emphasis Y level adjustment
8) Playback Y level adjustment
9) Playback V level adjustment
10) Y FM carrier adjustment
11) Y FM deviation adjustment
12) Recording Y level adjustment
13) Chroma emphasis adjustment
14) Recording chroma level adjustment

8-5-1. Playback Frequency Characteristic Adjustment (RP-105 board)

Mode	Playback
Signal	Alignment tape : for frequency characteristic adjustment(WR5-6C)
Measurement point	CH1 : CN503 Pin ④(RF SWP) CH2 : CN503 Pin ③(PB RF)
Measuring instrument	Oscilloscope
Adjustment element	PB1-CH : RV501 PB2-CH : RV502
Specified value	3.5MHz level : 5.5MHz level=4 : 3

[Adjustment Method]

1) Adjust with each RV so that the PB1-CH, PB2-CH and PB RF OUT satisfy the specified value.

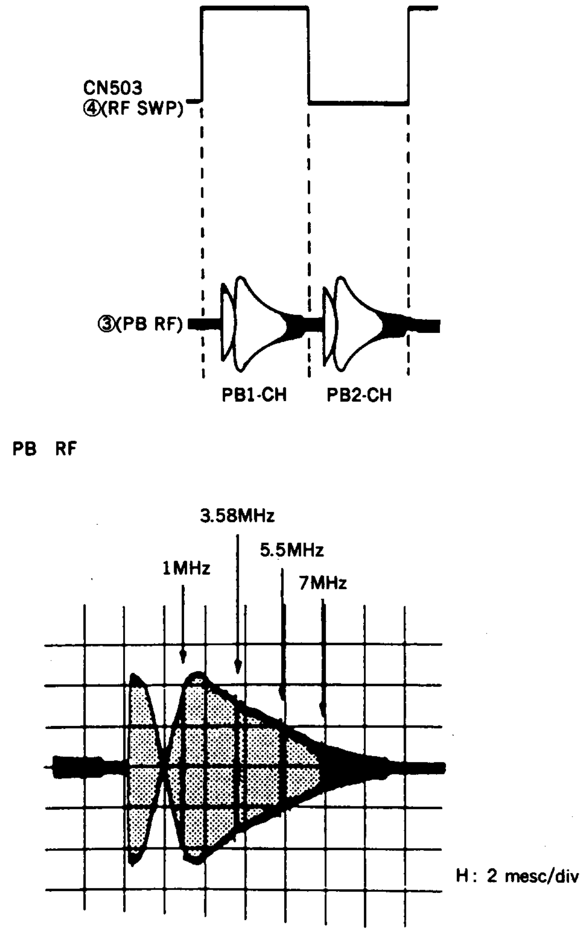


Fig. 8-7

8-5-2. fsc Check (SV-66 board)

Mode	Playback
Signal	Alignment tape : for operation check(WR5-5CSP) Color bar part
Measurement point	IC701 Pin ⑫
Measuring instrument	Oscilloscope Frequency counter
Specified value	Oscillation frequency : 4433619±150Hz Output level : 400±50mVp-p

[Checking Method]

1) Check that the oscillation frequency of the IC701 Pin ⑫ is 4433619±150Hz and the output level is 400±50mVp-p.

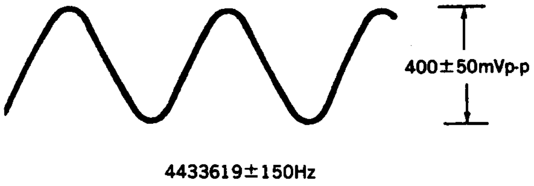


Fig.8-8.

8-5-3. SYNC AGC Adjustment (SV-66 board)

Mode	Recording
Signal	Color bar
Measurement point	IC601 Pin ㉜
Measuring instrument	Oscilloscope
Adjustment element	RV771
Specified value	0.50±0.02Vp-p

[Adjustment Method]

1) Adjust with RV771 to 0.50±0.02Vp-p.

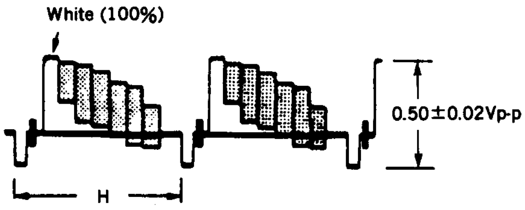


Fig. 8-9.

8-5-4. IR Adjustment (SV-66 board)

Mode	Recording
Signal	Color bar
Measurement point	IC601 Pin ⑦
Measuring instrument	Oscilloscope
Adjustment element	RV601
Specified value	Minimize the red remaining chroma element (60mVp-p or less)

[Preparation]

1) Short with the jumper wire between the Pin ⑭ and Pin (51) of IC601.

[Adjustment Method]

1) Minimize the red remaining chroma element with RV601. (60mVp-p)
2) After the adjustment, disconnect the jumper wire.

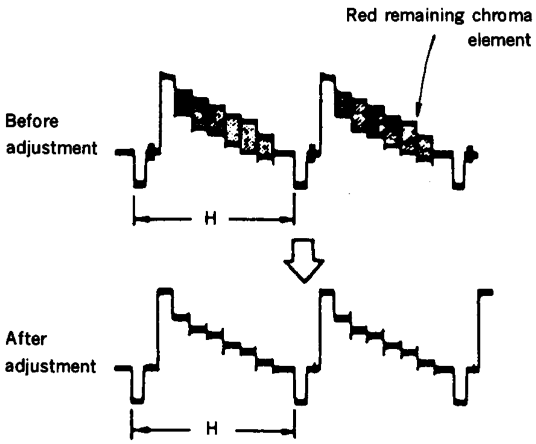

Red remaining chroma element
Before adjustment
H
After adjustment
H

Fig.8-10.

8-5-5. Y/C Separation Adjustment (SV-66 board)

Mode	Recording
Signal	Color bar
Measurement point	IC601 Pin ⑪
Measuring instrument	Oscilloscope
Adjustment element	RV602, RV651 (alternate adjustment)
Specified value	Minimize the red remaining chroma element (30mVp-p or less)

[Adjustment Method]

1) Adjust RV602 and RV651 alternately, and minimize the red remaining chroma element.

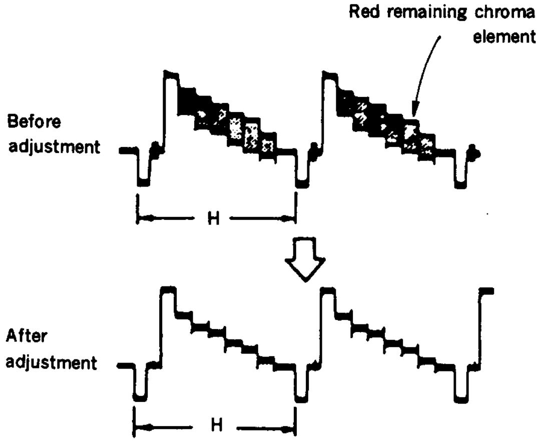

Red remaining chroma element
Before adjustment
H
After adjustment
H

Fig.8-11.

8-5-6. Emphasis Y Level Adjustment (SV-66 board)

Mode	Recording
Signal	Color bar
Measurement point	IC601 Pin ③
Measuring instruement	Oscilloscope
Adjustment element	RV652
Specified value	0.50±0.02Vp-p

[Adjustment Method]

1) Adjust with RV652 to 0.50±0.02Vp-p.

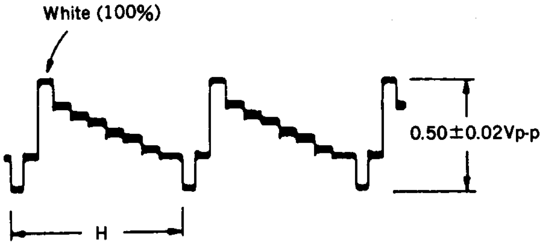


Fig.8-12.

8-5-7. De-emphasis Y Level Adjustment (SV-66 board)

Mode	Playback
Signal	Alignment tape: for operation check (WR5-5CSP)
Measurement point	IC601 Pin ㉑
Measuring instrument	Oscilloscope
Adjustment element	RV605
Specified value	0.50±0.02Vp-p

[Adjustment Method]

1) Adjust with RV605 to 0.50±0.02Vp-p.

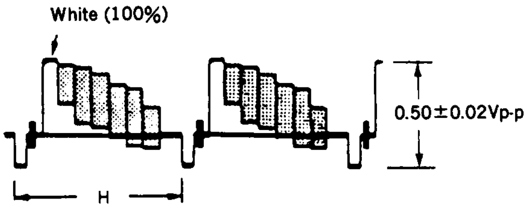


Fig.8-13.

8-5-8. Playback Y Level Adjustment (SV-66 board)

Mode	Playback
Signal	Alignment tape: for operation check (WR5-5CSP) color bar part
Measurement point	IC601 Pin ③
Measuring instrument	Oscilloscope
Adjustment element	RV653
Specified value	0.50±0.02Vp-p

[Adjustment Method]

1) Adjust with RV653 to 0.50±0.02Vp-p.

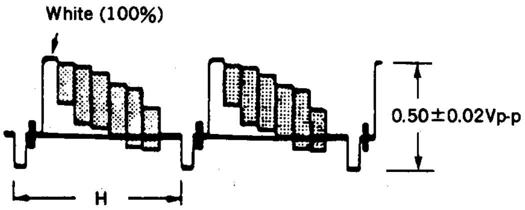


Fig.8-14.

8-5-9. Playback V Level Adjustment (SV-66 board)

Mode	Playback
Signal	Alignment tape: for operation check (WR5-5CSP) color bar part
Measurement point	IC601 Pin ③
Measuring instrument	Oscilloscope
Adjustment element	RV772
Specified value	1.00±0.05Vp-p

[Adjustment Method]

1) Adjust with RV772 to 1.00±0.05Vp-p.

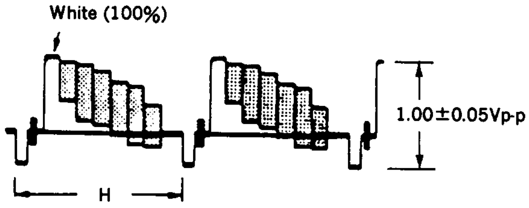


Fig.8-15.

8-5-10. Y FM Carrier Adjustment (SV-66 board)

Mode	Recording
Signal	No signal
Measurement point	CN801 Pin ⑩
Measuring instrument	Frequency counter
Adjustment element	RV603
Specified value	4.37±0.02MHz

[Adjustment Method]

1) Adjust with RV603 to 4.37±0.02MHz.
2) After the adjustment, be sure to perform 「Y FM deviation adjustment」.

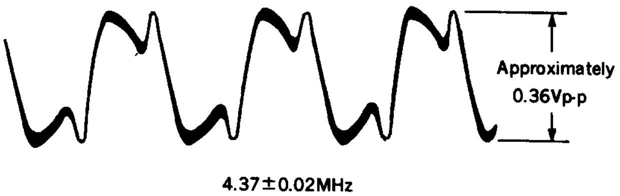


Fig.8-16.

8-5-11. Y FM Deviation Adjustment (SV-66 board)

Mode	Recording and playback
Signal	Color bar
Measurement point	VIDEO input-output terminal (75Ω terminal)
Measuring instrument	Oscilloscope
Adjustment element	RV604
Specified value	Playback level is 1.00±0.05Vp-p

Note) 「De-emphasis Y level adjustment」, 「Playback Y level adjustment」 and 「Y FM carrier adjustment」 should be completed.

[Adjustment Method]

1) Record the color bar signal.
2) Play back the recorded signal.
3) Check the playback output.
   Specified value: 1.00±0.05Vp-p
4) When the specified value is not satisfied, rotate RV604 as shown in the following table and return to the item 1), and then perform the reconfirmation.

	Rotating direction of RV604
Over the specified value	Clockwise (↻)
Under the specified value	Counterclockwise (↺)

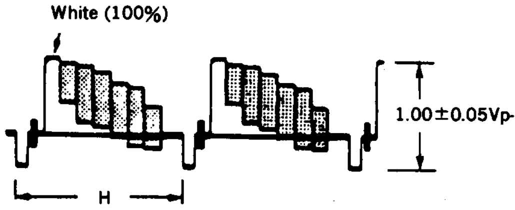


Fig.8-17

8-5-12. Recording Y Level Adjustment (SV-66 board)

Mode	Recording
Signal	No signal
Measurement point	CN801 Pin ⑩
Measuring instrument	Oscilloscope (20MHz band limit ON)
Adjustment element	RV802
Specified value	360±5mV

[Adjustment Method]

1) Adjust with RV802 to 360±5mV.

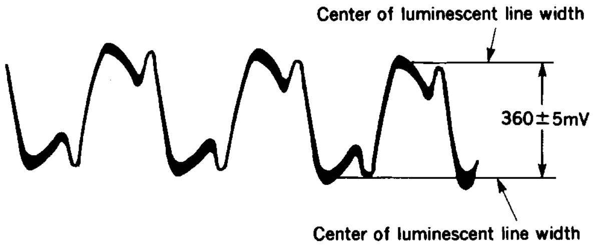

Center of luminescent line width
360±5mV
Center of luminescent line width

Fig.8-18.

8-5-13. Chroma Emphasis Adjustment (SV-66 board)

Mode	Recording
Signal	Color bar
Measurement point	IC701 Pin ㉔
Measuring instrument	Oscilloscope
Adjustment element	FL702
Specified value	Minimize the red level

[Preparation]

1) Connect the resistance of 3.3kΩ between the IC701 Pin ㉔ and GND.

[Adjustment Method]

1) Minimize the red level with FL702.
2) After the adjustment, disconnect the resistance connected in the preparation.

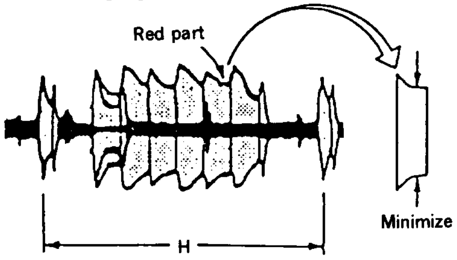

Red part
Minimize
H

Fig.8-19.

8-5-14. Recording Chroma Level Adjustment (SV-66 board)

Mode	Recording
Signal	Color bar
Measurement point	CN801 Pin ⑪
Measuring instrument	Oscilloscope
Adjustment element	RV701
Specified value	Red level : 160±10mVp-p

[Adjustment Method]

1) Adjust the red level to 160±10mVp-p with RV701.

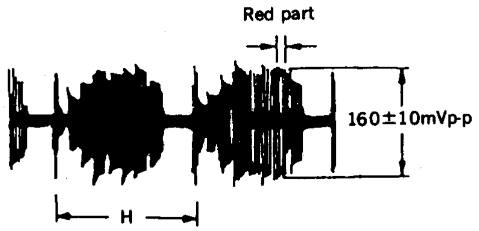

Red part
160±10mVp-p
H

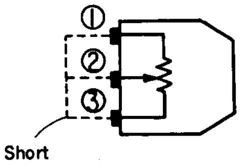
Fig.8-20.

8-6. LCD SYSTEM ADJUSTMENT

Caution: If you touch the back light holder, you may receive an electric shock. Be careful to perform the adjustment.

[Preparation]

1) The adjustment except for「white balance adjustment」and「V COM DC adjustment」, the back light unit is not required. Remove it and perform the adjustment.
2) Set the VR as follows if there is no special direction.
   - BRIGHT (RV004)
     ·········Set the mechanical center position and short among pin ①,② and ③.



   - COLOR (RV001)
     ·········The position where the voltage of IC002 (57) of the RG-22 board is 1.5±0.1Vdc.

[Video input signal for adjustment]

Input the color bar signal, which the chroma signal and the burst signal are turned off, to the video input terminal as a video input signal for adjustment. Check with the CN001 pin ㉔ of the RG-22 board.

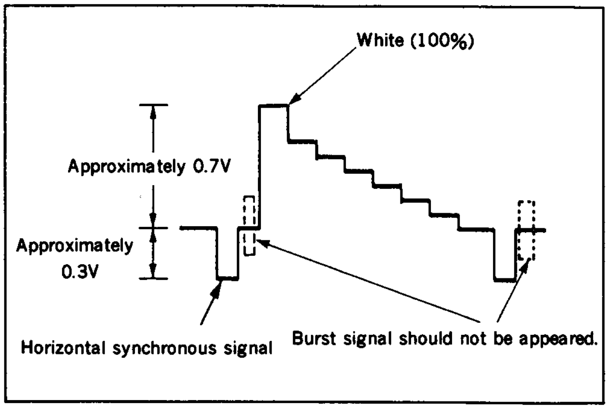

White (100%)
Approximately 0.7V
Approximately 0.3V
Horizontal synchronous signal
Burst signal should not be appeared.

Fig.8-21. Color bar signal which the chroma signal and the burst signal are turned off

8-6-1. Contrast Adjustment (RG-22 board)

Mode	POWER ON
Signal	Color bar which the chroma signal and the burst signal are turned off.
Measurement point	CN002 Pin ⑨
Measuring instrument	Oscilloscope
Adjustment element	RV006
Specified value	3.0±0.1V

[Adjustment Method]

1) Adjust with RV006 so that the voltage between white (100%) and the pedestal is 3.0±0.1V.

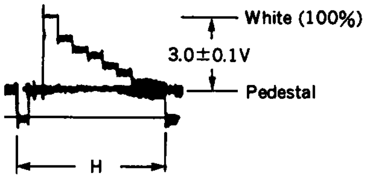

White (100%)
3.0±0.1V
Pedestal
H

Fig.8-22.

8-6-2. R Gain Adjustment (RG-22 board)

Mode	POWER ON
Signal	Color bar which the chroma signal and the burst signal are turned off
Measurement point	CN002 Pin ⑩
Measuring instrument	Oscilloscope
Adjustment element	RV005
Specified value	3.0±0.1V

[Adjustment Method]

1) Adjust with RV005 so that the voltage between white (100%) and the pedestal is 3.0±0.1V.

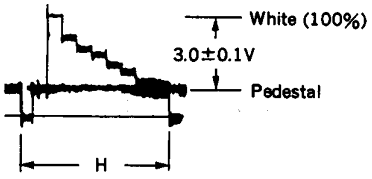

White (100%)
3.0±0.1V
Pedestal
H

Fig. 8-23.

8-6-3. B Gain Adjustment (RG-22 board)

Mode	POWER ON
Signal	Color bar which the chroma signal and the burst signal are tured off
Measurement point	CN002 Pin ⑪
Measuring instrument	Oscilloscope
Adjustment element	RV003
Specified value	2.6±0.1V

[Adjustment Method]

1) Adjust with RV003 so that the voltage between white (100%) and the pedestal is 2.6±0.1V.

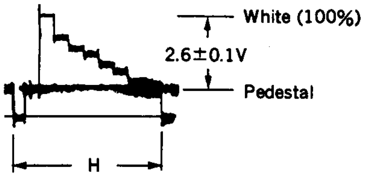


Fig. 8-24.

8-6-4. Sub Bright Adjustment (RG-22 board)

Mode	POWER ON
Signal	Color bar which the chroma signal and the burst signal are turned off
Measurement point	CN002 Pin ⑨, Pin ⑩ and Pin⑪ (G) (R) (B)
Measuring instrument	Oscilloscope (DC range)
Adjustment element	RV010, RV007 and RV008
Specified value	−3.4±0.1V

[Connection]

1) Install the LCD unit and perform the adjustment.

[Adjustment Method]

1) Adjust with RV009 so that the DC level of the pedestal part of the positive polarity G signal is −3.4±0.1Vdc.
2) Adjust with RV007 so that the DC level of the pedestal part of the positive polarity R signal is −3.4±0.1Vdc.
3) Adjust with RV008 so that the DC level of the pedestal part of the positive polarity B signal is −3.4±0.1Vdc.

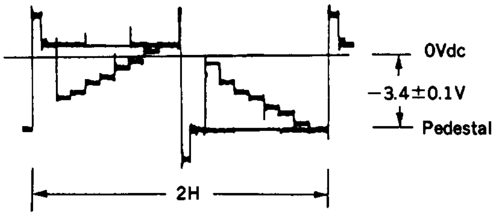


Fig.8-25.

8-6-5. fsc Adjustment (RG-22 board)

Mode	POWER ON
Signal	Video signal which the chroma signal, the burst signal and the Y signal are turned off.(Video signal with only synchronous signal)
Measurement point	IC002 Pin ④
Measuring instrument	Frequency counter
Adjustment element	CV002
Specified value	4433619±300Hz

Note: Connect the frequency counter through the buffer amplifier (oscilloscope, etc) with high impedance (1MΩ or more) and low capacity.

[Adjustment Method]

1) Adjust with CV002 so that the fsc frequency is 4433619± 300Hz.

8-6-6. White Balance Adjustment (RG-22 board)

Mode	POWER ON
Signal	Color bar which the chroma signal and the burst signal are turned off.
Measurement point	Check on the LCD screen
Measuring instrument	
Adjustment element	RV003 (B gain) RV005 (R gain)
Specified value	Screen should not be colored.

[Connection]

1) Perform the adjustment connecting the LCD unit and the back light.

[Adjustment Method]

1) Check that the LCD screen is not colored. If the screen is colored, adjust with RV003 (B gain) and RV005 (R gain).

8-6-7. V COM DC Adjustment (RG-22 board)

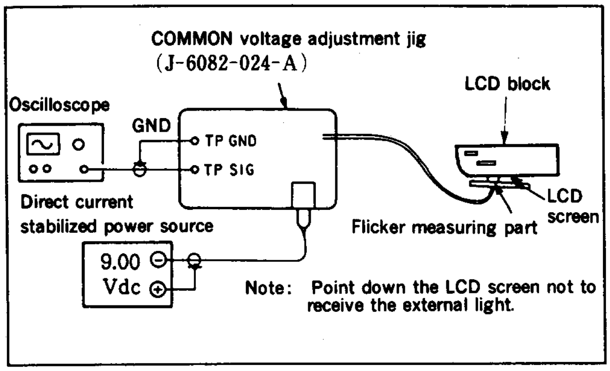
Mode	POWER ON
Signal	Color bar which the chroma signal and the burst signal are turned off
Measurement point	LCD screen
Measuring instrument	Oscilloscope
Adjustment element	V COM DC VR on the LCD unit
Specified value	The amplitude of the flicker waveform is the minimum.

Note: Perform the 「V COM DC adjustment」 with assembling the LCD block.
Take care that the external light should not enter into the light receiving part of the COMMON voltage adjustment jig.

[Adjustment Method]

1) Expose the light receiving part of the COMMON voltage adjustment jig to the LCD screen. (Point down the LCD screen not to receive the external light.)
2) Connect the oscilloscope with the COMMON voltage adjustment jig.
3) Turn V COM DC VR and check that the flicker waveform as shown in the fig.8-26 is output.
(When the flicker waveform is not output, check the exposing method of the light receiving part and the external light condition, and check with turning the BRIGHT control.)
4) Minimize the flicker waveform amplitude with V COM DC VR.

Note: Turn V COM DC VR slowly because it takes long time to respond to LCD.
The minimum point of the flicker waveform amplitude is nearly coincided with the maximum point of the contrast.


COMMON voltage adjustment jig
(J-6082-024-A)
LCD block
Oscilloscope
GND
TP GND
TP SIG
Direct current
stabilized power source
9.00
Vdc
Flicker measuring part
LCD
screen

Note: Point down the LCD screen not to receive the external light.

Fig.8-26

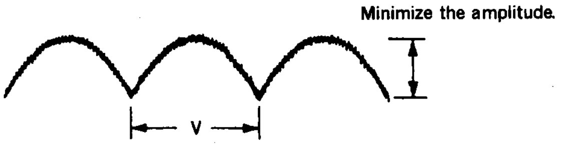

Minimize the amplitude.
V

Fig.8-27.

8-6-8. Character Position Adjustment (RG-22 board)

Mode	POWER ON
Signal	Color bar
Measurement point	LCD screen
Measuring instrument	
Adjustment element	CV801
Specified value	Fig.8-28.

[Adjustment Method]

1) Press the CLOCK SET button of the LCD block and check that black frame and "0 : 00" display on the LCD screen.
2) Make black frame on the right end of the LCD screen with CV801 and adjust so that it dissapears.
3) Press twice the NEXT button of the LCD block and turn off the black frame on the LCD screen. (It takes approximately five seconds to turn off the frame.)

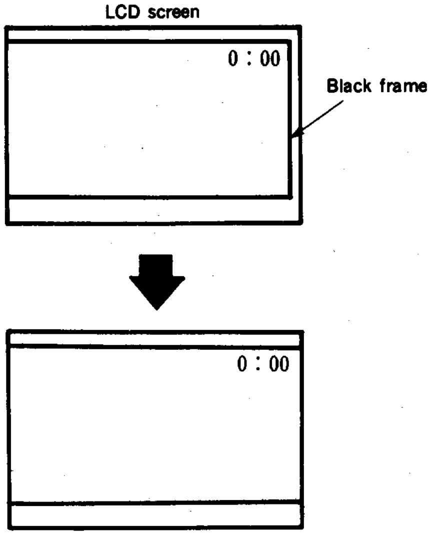

LCD screen
0 : 00
Black frame
0 : 00

Fig.8-28.

8-7. TUNER SYSTEM ADJUSTMENT

8-7-1. RF AGC Adjustment (TU-126 board)

Mode	E-E
Signal	Broadcast TV signal
Adjustment element	RV201

[Adjustment Method]

1) Connect the monitor TV.
2) Adjust the monitor TV to the most proper contrast and receive the broadcast TV signal.
3) Turn RV201 to show the snow noise.
4) Turn RV201 in the reverse direction, and set to the point that the snow noise disappears.
5) Receive each channel and check that there is no beat by the cross modulation, picture distortion and snow noise.

8-8. AUDIO SYSTEM ADJUSTMENT

- Adjust using the color bar signal as the video signal input.

[Connection of the measuring instruments for audio]

Connect the audio system measuring instruements as shown in the following figure as well as the video system measuring instruments. Set the power switch to the ｢VTR｣ side if there is no special direction.

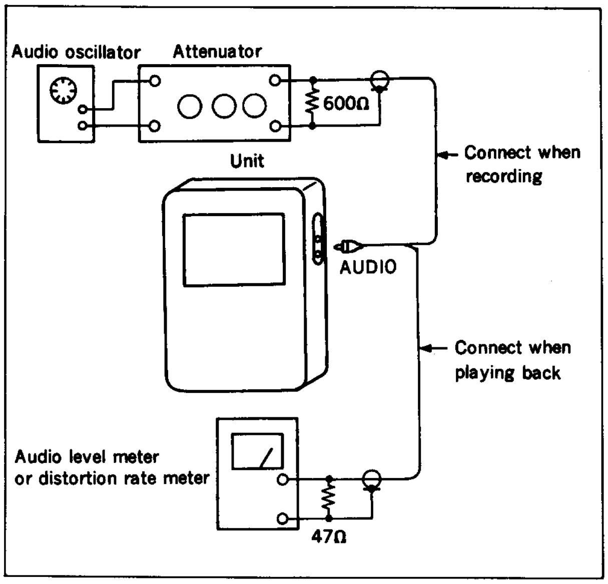

Audio oscillator
Attenuator
600Ω
Unit
Connect when recording
AUDIO
Connect when playing back
Audio level meter or distortion rate meter
47Ω

Fig.8-29.

[VIDEO/AUDIO terminal of the unit]

The VIDEO and AUDIO terminal has a function both input and output. The operation as the input terminal or as the output terminal is automatically selected according to the operation mode of the unit.

When connecting with other instruements, perform according to input-ouput of the terminal.

Operation mode of the unit and the input-output automatic selection of the terminal

Input mode selected with the INPUT SELECT button	The case that the unit is stopped or the recording mode is set	The case that the unit is set to the playback mode
TUNER (Television screen)	Output	Output
LINE*	Input	Output
CAMERA	Output	Output

*When the LINE is selected with the INPUT SELECT button, the display of INPUT and OUTPUT is shown.

[Setting of the switches]

Set the following mode if there is no special direction.

- SP/LP button ······························SP
- INPUT SELECT button ························LINE

[Adjustment Procedures]

1.5MHz carrier frequency adjustment
E-E output level check
1.5MHz carrier level check
1.5MHz deviation adjustment
Total level characteristic check
Total distortion rate check

8-8-1. 1.5MHz Carrier Frequency Adjustment (AU-93 board)

Mode	Recording
Signal	No signal
Mesurement point	CN002 Pin ③
Meauring instrument	Frequency counter
Adjustment element	RV002
Specified value	1.500±0.002MHz

Note : Use the 10 : 1 probe for connecting the frequency counter.

[Adjustment Method]

1) Adjust with RV002 to 1.500±0.002MHz.

8-8-2. E-E Output Level Check

Mode	Camera recording
Signal	CN-6P board J601 Pin ⑤ 400Hz, −15dBs
Measurement point	AUDIO Input-output terminal
Measuring instrument	Audio level meter
Specified value	−7.5±2dBs

[Checking Method]

1) Check that the 400Hz signal is −7.5±2dBs.

8-8-3. 1.5MHz Carrier Level Check (AU-93 board)

Mode	Recording
Signal	No signal (Insert a shorting plug)
Measurement point	CN002 Pin ③
Measuring instrument	Oscilloscope
Specified value	120±30mVp-p

[Checking Method]

1) Check that the 1.5MHz REC AFM RF signal level is 120±30mVp-p. (Read the center level of the luminescent width.)

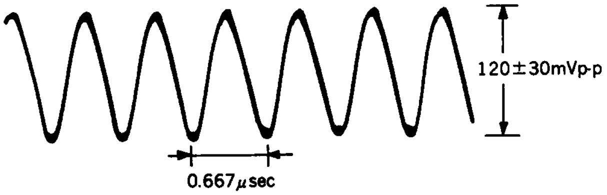


Fig.8-30.

8-8-4. 1.5MHz Deviation Adjustment (AU-93 board)

Mode	Playback
Signal	Alignment tape : for operation check (WR5-4CSP)
Measurement point	CN001 Pin ⑤
Measuring instruement	Oscilloscope
Adjustment element	RV003
Specified value	925±21mVp-p (−7.5±0.2dBs)

[Adjustment Method]

1) Adjust with RV003 so that the 400Hz signal level is 925±21mVp-p.

8-8-5. Total Level Characteristic Check

Mode	Self playback
Signal	400Hz, −7.5dBs AUDIO input-output terminal
Measurement point	AUDIO input-output terminal
Measuring instrument	Audio level meter
Specified value	Signal level : −7.5±2dBs

[Checking Method]

1) Record the signal.
2) Connect the audio level meter to the AUDIO input-output terminal.
3) Play back the recorded part and check that the output signal level is −7.5±2dBs.

8-8-6. Total Distortion Rate Check

Mode	Self playback
Signal	400Hz, −7.5dBs
Measurement point	AUDIO input-output terminal
Measuring instrument	Distortion Rate Meter
Specified value	1.2% or less

[Checking Method]

1) Record the signal.
2) Connect the distrotion rate meter to the AUDIO input-output terminal.
3) Play back the recorded part and check that the distortsion rate is 1.2% or less.

8-9. SECAM-PAL CONVERSION SYSTEM ADJUSTMENT

[Set-up at the adjustment]

As the video signal obtained from the SECAM pattern generator is used as the adjustment signal for adjusting, it is required that the video output signal satisfies the specified value. Connect the pattern generator and the oscilloscope with the VIDEO input-output terminal. Check that the amplitude of the synchronous signal of the video signal is approximatery 0.3V, the amplitude of the picture part is approximatery 0.7V, the amplitude of the burst signal is flat.

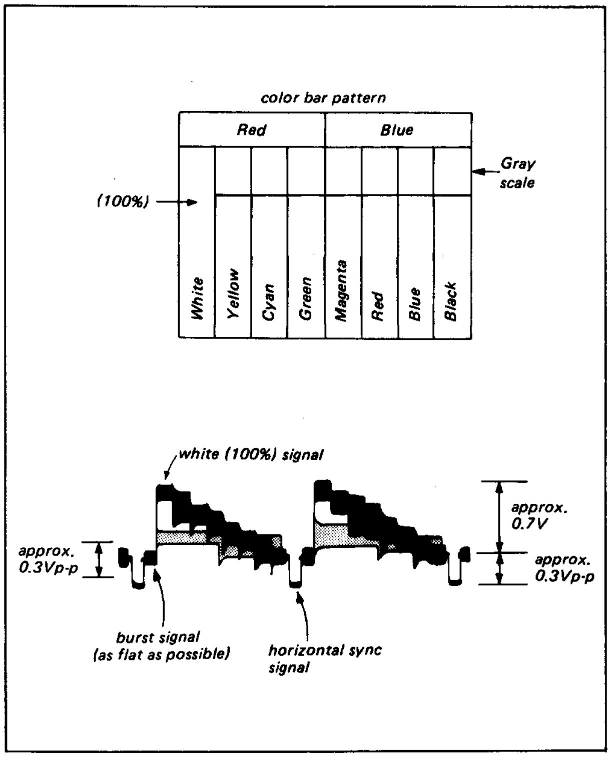

color bar pattern
Red
Blue
Gray scale
(100%)
White
Yellow
Cyan
Green
Magenta
Red
Blue
Black
white (100%) signal
approx. 0.7V
approx. 0.3Vp-p
approx. 0.3Vp-p
burst signal (as flat as possible)
horizontal sync signal

Fig. 8-31.

8-9-1. Bell Filter Adjustment (AU-93 board)

Mode	E-E (LINE IN)
Signal	SECAM color bar
Measurement point	IC301 Pin ㉙
Measuring instrument	Oscilloscope
Adjustment element	LV304
Specified value	The level difference is 0±20mV.

[Adjustment Method]

1) Adjust with LV304 so that the level difference is 0±20mV.

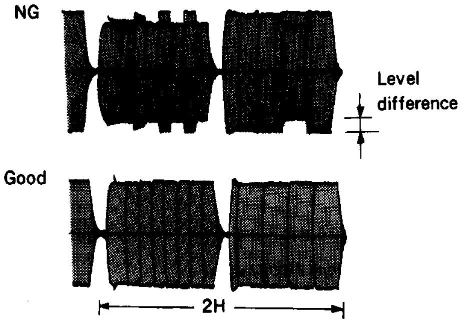


Fig. 8-32.

8-9-2. VCO Adjustment (AU-93 board)

Mode	E-E (LINE IN)
Signal	SECAM color bar
Measurement point	IC301 Pin ⑨
Measuring instrument	Frequency counter
Adjustment element	RV303
Specified value	15625±10Hz

[Preparation]

1) Short with the jumper wire between the pin ⑱ and pin ⑲ of IC301.

[Adjustment Method]

1) Adjust with RV303 to 15625±10Hz.
2) After the adjustment, disconnect the jumper wire.

8-9-3. I REF Adjustment (AU-93 board)

Mode	E-E (LINE IN)
Signal	SECAM color bar
Measurement point	CH1 : CN001 Pin ⑳ CH2 : IC301 Pin ⑨
Measuring instrument	Oscilloscope
Adjustment element	RV301
Specified value	t=4.5±0.1μsec

[Adjustment Method]

1) Adjust with RV301 so that t=4.5±0.1μsec.

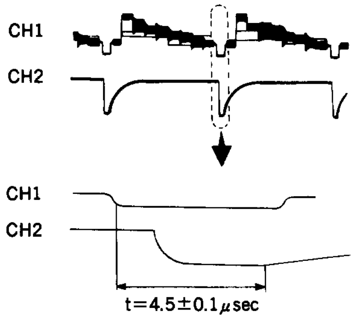


Fig. 8-33.

8-9-4. R-Y fo Adjustment (AU-93 board)

Mode	E-E (LINE IN)
Signal	SECAM color bar
Measurement point	IC302 Pin ②
Measuring instrument	Oscilloscope
Adjustment element	LV302
Specified value	The level difference is 0±0.02V.

[Preparation]

1) Short with the jumper wire between the pin ⑲ and ㉑ of IC301.

[Adjustment Method]

1) Adjust with LV302 so that the level difference between the blank level and the black level is 0±0.02V.

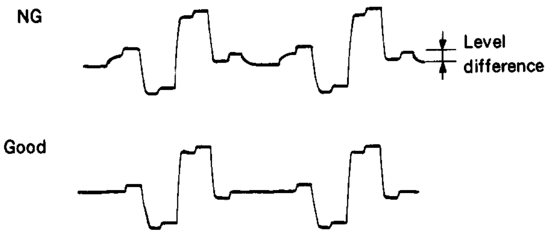


Fig. 8-34.

8-9-5. B-Y fo Adjustment (AU-93 board)

Mode	E-E (LINE IN)
Signal	SECAM color bar
Measurement point	IC302 Pin ③
Measuring instruement	Oscilloscope
Adjustment element	LV301
Specified value	The level difference is 0±0.02V.

[Preparation]

1) Short with the jumper wire between the pin ⑲ and ㉑ of IC301.

[Adjustment Method]

1) Adjust with LV301 so that the level difference between the blank level and the black level is 0±0.02V.

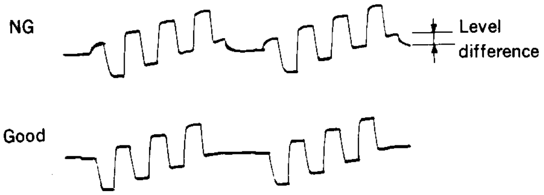


Fig. 8-35.

8-9-6. B-Y Chroma Level Adjustment (AU-93 board)

Mode	E-E (LINE IN)
Signal	SECAM color bar
Measurement point	IC302 Pin ③
Measuring instruement	Oscilloscope
Adjustment element	RV302
Specified value	0.75±0.05Vp-p

[Preparation]

1) Short the jumper wire between the pin ⑲ and ㉑ of IC301.

[Adjustment Method]

1) Adjust with RV302 to 0.75±0.05Vp-p.
2) After the adjustment, disconnect the jumper wire.

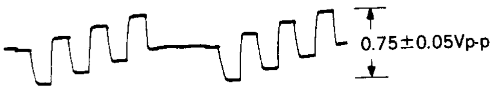


Fig. 8-36.

8-9-7. Burst Position Check (AU-93 board)

Mode	E-E (LINE IN)
Signal	SECAM color bar
Measurement point	CH1 : Q306 emitter CH2 : IC302 Pin ⑰
Measuring instruement	Oscilloscope
Specified value	t=5.6±0.1μsec

[Checking Method]

1) Check that t=5.6±0.1μsec.

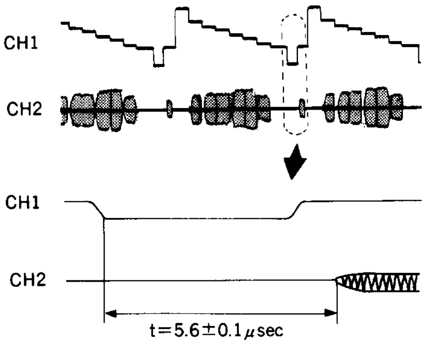


Fig. 8-37.

8-9-8. PAL/SECAM Discrimination Check (1) (AU-93 board)

Mode	E-E (LINE IN)
Signal	SECAM color bar
Measurement point	CN001 Pin ⑦
Measuring instrument	Digital voltmeter
Specified value	Less than 0.3Vdc.

[Checking Method]

1) Check that the DC level is less than 0.3V.

8-9-9. PAL/SECAM Discremination Check (2) (AU-93 board)

Mode	E-E (LINE IN)
Signal	PAL color bar
Measurement point	CN001 Pin ⑦
Measuring instrument	Digital voltmeter
Specified value	More than 4.0Vdc.

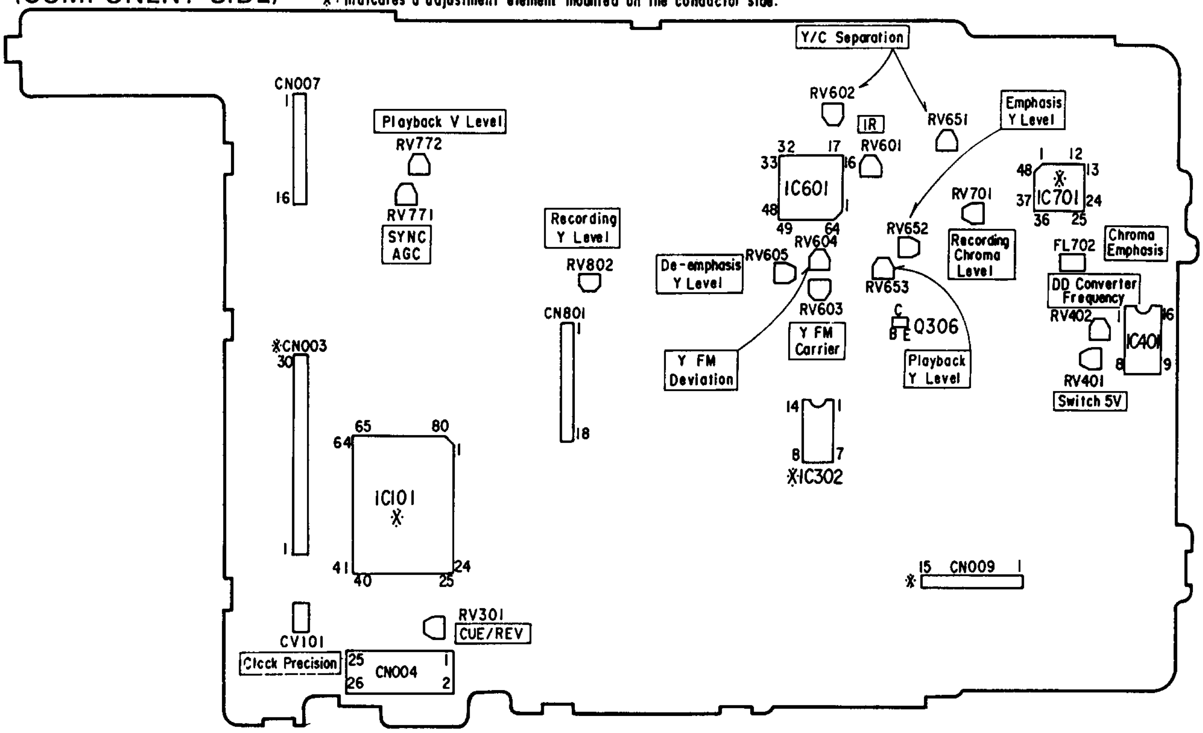
[Checking Method]

1) Check that the DC level is more than 4.0V.

8-10. ADJUSTING PARTS LOCATION DIAGRAM

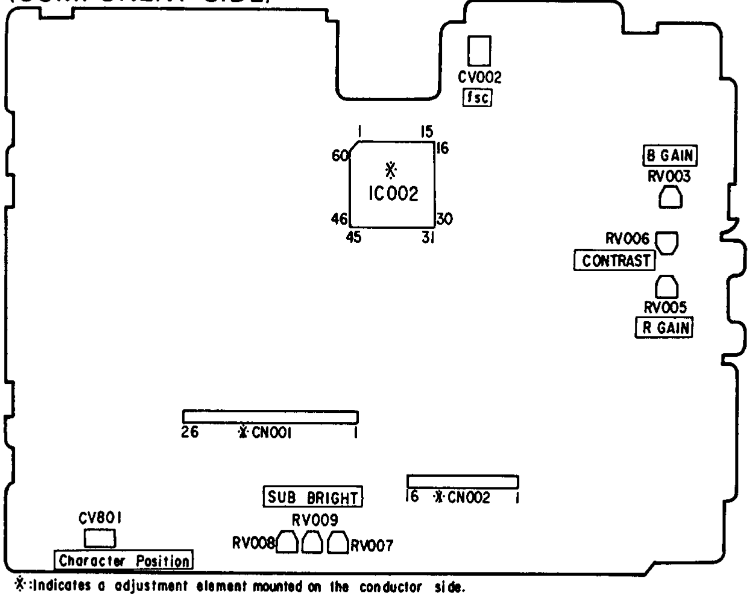
SV-66 BOARD
(COMPONENT SIDE)

※: Indicates a adjustment element mounted on the conductor side.



Y/C Separation
RV602
IR
RV651
Emphasis Y Level
CN007
Playback V Level
RV772
RV771
SYNC AGC
Recording Y Level
RV802
IC601
RV601
RV701
IC701
Recording Chroma Level
Chroma Emphasis
FL702
De-emphasis Y Level
RV605
RV604
RV652
RV653
RV603
DD Converter Frequency
RV402
IC401
RV401
Switch 5V
Q306
Y FM Carrier
Y FM Deviation
Playback Y Level
CN801
※CN003
IC101
※IC302
CN009
RV301
CUE/REV
CV101
Clock Precision
CN004

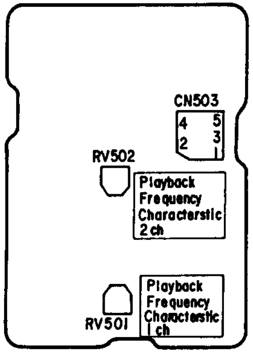
RG-22 BOARD
(COMPONENT SIDE)



CV002
fsc
IC002
B GAIN
RV003
RV006
CONTRAST
RV005
R GAIN
※CN001
SUB BRIGHT
RV009
※CN002
CV801
RV008
RV007
Character Position

※: Indicates a adjustment element mounted on the conductor side.

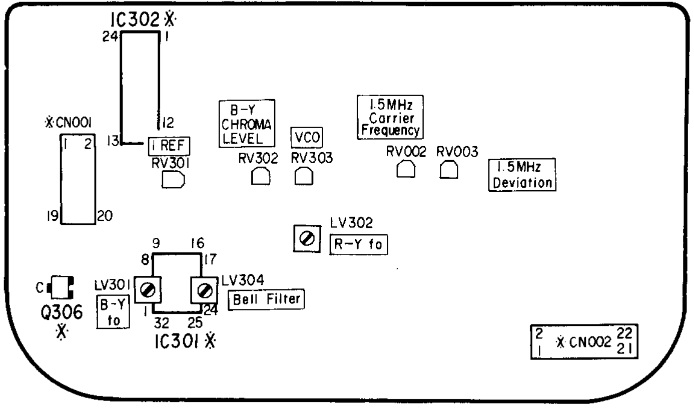
RP-105 BOARD
(COMPONENT SIDE)



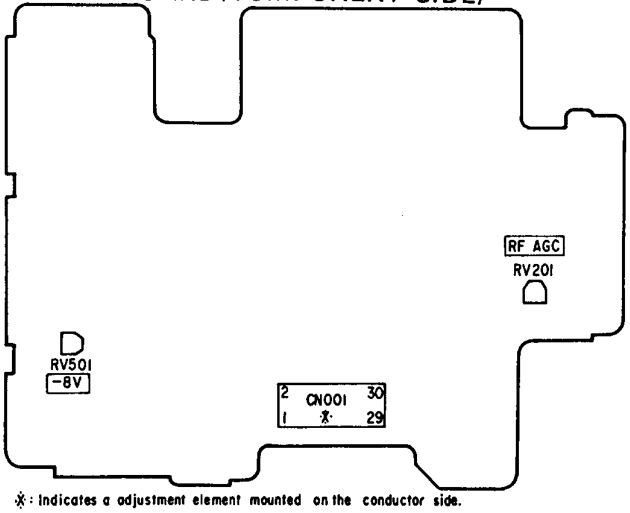
CN503
RV502
Playback Frequency Characterstic 2ch
RV501
Playback Frequency Characterstic 1ch

AU-93 BOARD (COMPONENT SIDE)

※ : Indicates a adjustment element mounted the conductor side.

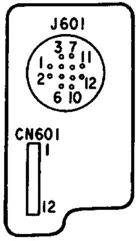

IC302 ※
24
1
12
13
※CN001
1
2
19
20
I REF
RV301
B-Y CHROMA LEVEL
RV302
VCO
RV303
1.5MHz Carrier Frequency
RV002
RV003
1.5MHz Deviation
LV302
R-Y fo
9
16
8
17
LV301
B-Y fo
LV304
Bell Filter
1
32
25
24
IC301 ※
C
Q306
※
2
1
※ CN002
22
21

TU-126 BOARD (COMPONENT SIDE)


RF AGC
RV201
RV501
-8V
2
CN001
30
1
※
29

※ : Indicates a adjustment element mounted on the conductor side.

CN-6P BOARD (COMPONENT SIDE)


J601
3
7
11
1
2
12
6
10
CN601
1
12